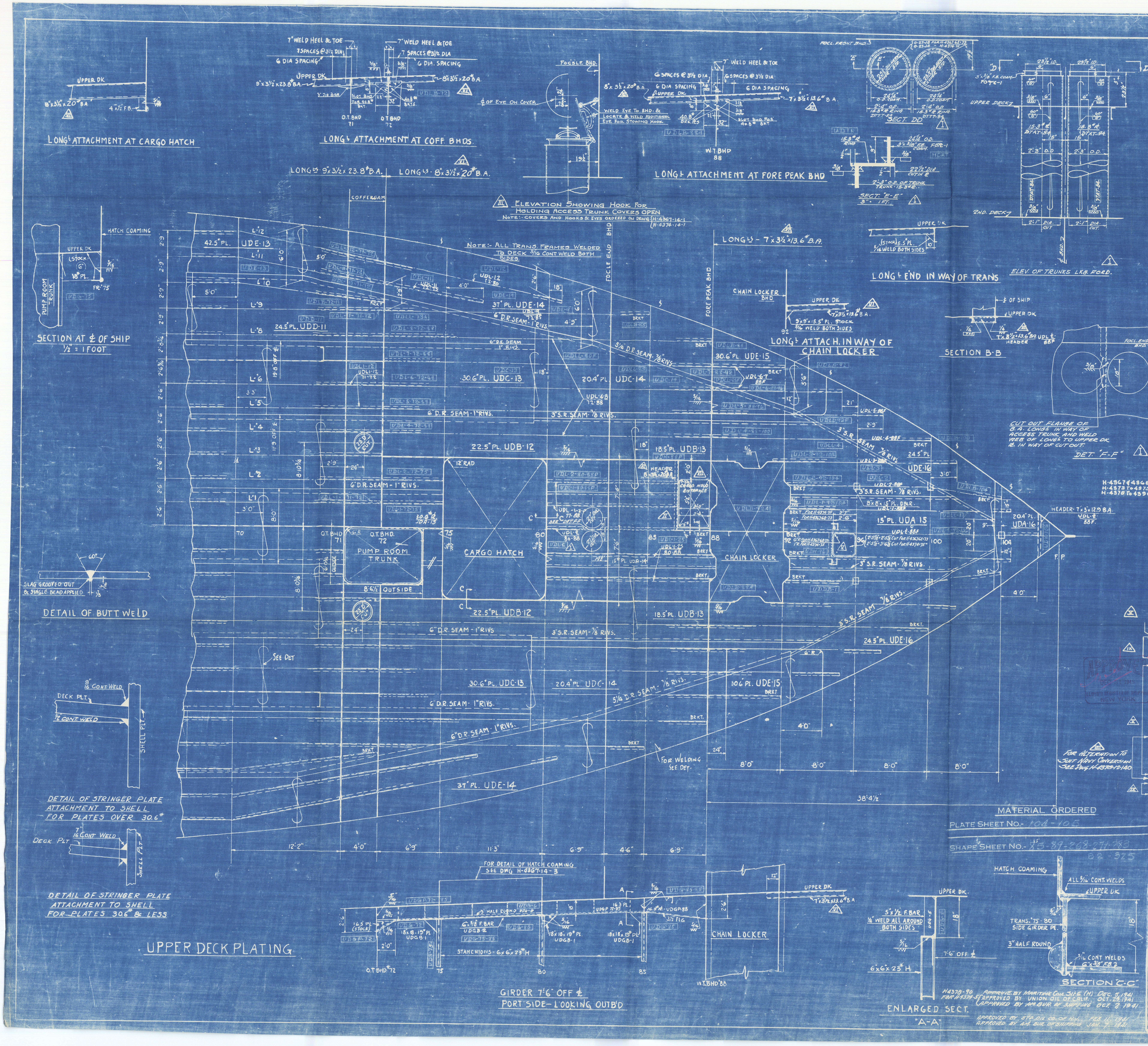
STANVAC CALCUTTA

"STANVAC CALCUTTA" *

BETH'LEM YD NO. 4424

UPPER DECK PLATING FORE END

8


LONG^L ATTACHMENT AT CARGO HATCH
LONG^L ATTACHMENT AT COFF BHDS
LONG^L ATTACHMENT AT FORE PEAK BHD
SECT. "D-D"
SECT. "E-E"
ELEV OF TRUNKS LKG. FORD.
LONG^L END IN WAY OF TRANS
LONG^LS 9"x3½"x 23.8# B.A.
LONG^LS 8"x3½"x20# B.A.
LONG^LS - 7"x3½"x13.6# B.A.
ELEVATION SHOWING HOOK FOR HOLDING ACCESS TRUNK COVERS OPEN
NOTE:- COVERS AND HOOKS & EYES ORDERED ON DWG. H-4367-14-1
NOTE:- ALL TRANS. FRAMES WELDED TO DECK 5/16 CONT WELD BOTH SIDES
SECTION AT ℄ OF SHIP 1/2 = 1 FOOT
PUMP ROOM TRUNK
HATCH COAMING
LONG^L ATTACH. IN WAY OF CHAIN LOCKER
SECTION B-B
DET. "F-F"
CUT OUT FLANGE OF 8" LONGL IN WAY OF ACCESS TRUNK AND WELD WEB OF LONGL TO UPPER DK. & IN WAY OF CUT OUT.
COFFERDAM
FOCL. END BHD
FORE PEAK BHD
CHAIN LOCKER BHD
42.5# PL. UDE-13
37# PL. UDE-14
24.5# PL. UDD-11
30.6# PL. UDC-13
20.4# PL. UDC-14
30.6# PL. UDE-15
22.5# PL. UDB-12
18.5# PL. UDB-13
24.5# PL. UDE-16
15# PL. UDA 15
20.4# PL. UDA-16
6" D.R. SEAM - 1" RIVS.
3" S.R. SEAM - 7/8" RIVS.
5¼" D.R. SEAM - 7/8" RIVS.
PUMP ROOM TRUNK
CARGO HATCH
CHAIN LOCKER
O.T. BHD. 72
8'-6½" OUTSIDE
HEADER - 7"x3½"x12.5# B.A.
F.P.
DETAIL OF BUTT WELD
SLAG GROOVED OUT & SINGLE BEAD APPLIED
DETAIL OF STRINGER PLATE ATTACHMENT TO SHELL FOR PLATES OVER 30.6#
DETAIL OF STRINGER PLATE ATTACHMENT TO SHELL FOR PLATES 30.6# & LESS
DECK PLT
SHELL PLT
5/16" CONT WELD
UPPER DECK PLATING
FOR DETAIL OF HATCH COAMING SEE DWG H-4367-14-3
GIRDER 7'6" OFF ℄ PORT SIDE - LOOKING OUTB'D
STANCHIONS - 6x6x23# H
CHAIN LOCKER
W.T. BHD 88
ENLARGED SECT. "A-A"
6"x6"x23# H
7'-6" OFF ℄
SECTION "C-C"
HATCH COAMING
ALL 5/16" CONT. WELDS
UPPER DK
TRANS. "75-80 SIDE GIRDER PL.
3" HALF ROUND
5/16" CONT WELDS 6"x3/8" F.B.
FOR WELDING SEE DET.
38'-4½"
H-4367 & 4368
H-4373 & 4375
H-4378 TO 4390

FOR ALTERATION TO SUIT NAVY CONVERSION SEE DWG. H-4378-12-140

MATERIAL ORDERED
PLATE SHEET NO.- 104-105
SHAPE SHEET NO.- 85-89-268-271-283
82-325

H4378-90
FOR H4374-5
APPROVE BY MARITIME COM. SIFC (H) DEC. 5, 1941
APPROVED BY UNION OIL OF CALIF. OCT. 29, 1941
APPROVED BY AM. BUR. OF SHIPPING OCT. 7, 1941

APPROVED BY STD. OIL CO. OF N.J. FEB. 11, 1941
APPROVED BY AM. BUR. OF SHIPPING JAN. 7, 1941

AREA = 27½" x 44" = 8.25 □'

ALTERATIONS

NO	DESCRIPTION	DATE	APPR'D. BY
I	DEEP TANK ACCESS TRUNK FORD. OF FR. 72 DELETED AND TWO ACCESS TRUNKS ADDED AFT. OF FOCL. END BHD. TO SUIT OWNERS. ELEVATION OF TRUNKS AND DETS. "D-D", "E-E" AND "F-F" ADDED	2-14-41 G.L.B.	
II	CUT IN PLATE FOR ENTRANCE TO CARGO HOLD ALTERED TO SUIT OWNERS COMMENTS ON DWG. H-4367-23-4B	4-26-41 E.L.	
III	ELEVATION SHOWING HOOK FOR HOLDING ACCESS TRUNK COVERS OPEN, ADDED	8-29-41 H.M.T.	
IV	DUPLICATED FOR H-4374 & H-4375 SIZE OF HATCH CHANGED BETWEEN FRS. 96 & 94 FOR HULLS 4374 & 4375.	9-25-41 D.E.B. 9-30-41 J.E.B.	
V	DUPLICATED FOR H-4378 TO H-4390	11-19-41 D.M.S.	
VI	8"x3½"x18# L-LONG^LS CHANGED TO 8"x3½"x20# L — 7"x3"x12# L-LONG^LS CHANGED TO 7"x3½"x13.6# L - EXCEPT FOR H-4367-68-73.	12-18-41 E.H.C	
VII	SIZE OF CARGO HOLD ENTRANCE BETW. FR 86 & 88 CHANGED	2-4-42 H.S. UA32	
VIII	NOTE APPLYING TO NAVY CONVERSION OF HULLS 4378 TO 82 INC. ADDED	10-14-42 J.H.H.	
IX	DUPLICATE FOR H-4423-26	7-2-43 KHJ	
X	DUPLICATE FOR H-4430, H4431	5-17-44 WKC	

RIVETING SCHEDULE

CONNECTIONS	DIA. RIV.	SPACING DIAS	SPACING INCH
ALL SEAMS AFT OF O.T. B.H.D. #72 DBL ROW	1"	3¾	3¾
6" SEAMS FORD OF O.T. B.H.D. #72	1"	4½"	4½"
5¼" SEAMS D.B.L. ROW	7/8"	4½"	4"
3" SEAMS SINGLE ROW	7/8"	4½"	4"
ALL LONG^LS AFT OF O.T. B.H.D. #72 (SEE DETAIL)	1"	6"	6"
LONG^LS TO DK. PL. OVER 29.5# FORD OF O.T. B.H.D. #72	1"	6"	6"
" " " " UNDER 29.5# " " " " "	7/8"	6"	6¼"

— WELDING SYMBOLS —

LOCATION — FILLET WELD — — BUTT WELD — REINFORCEMENT BEVEL
NEAR SIDE
FAR SIDE
BOTH SIDES

SIZE OF A 45° FILLET WELD IS THE NOMINAL LENGTH OF LEG.
ALL WELDS CONTINUOUS UNLESS OTHERWISE STATED.
SIZE OF CONTINUOUS FILLET WELDS INDICATED THUS: 3/16" 1/4"
SIZE, LENGTH, AND ℄ TO ℄ SPACING OF INCREMENTS OF CHAIN INTERMITTENT WELDING INDICATED THUS 1/4"-2"-6" OR STAGGERED 1/4"-3"-8"-S
ALL REINFORCEMENTS ON BUTT WELDS TO BE 25% OF PLATE THICKNESS UNLESS OTHERWISE STATED.
INCLUDED ANGLE OF BEVEL, OPENING AT ROOT, AND LOCATION OF REINFORCEMENT AND BEVEL INDICATED THUS: 60° 1/8
FIELD WELD. WELD ALL AROUND, 1/4" 3/8"
— METAL ARC WELDING TO BE USED UNLESS OTHERWISE STATED —

MATERIAL ORDERED
PLATE SHEET NO. 102
SHAPE SHEET NO. 64 & 65

ALTERATION	12-21-43	8-2-44
DEPT.		
MAIL: Owners		
Amer. Bur.		
Lloyd's R. S.		
U. S. M. C.		3
U. S. Navy		
U. S. C. G.		
Hopeman N. Y.		
Vendor		
INSPECTOR: Owner's Insp.		
Am. Bu. Insp.		
Lloyd's R. S.		
U. S. M. C. Insp.	1	1
U. S. Navy Insp.		
U. S. C. G. Insp.		
OFFICE DIST.: Hull Str. Draft	1	1
Hull Outfit. Draft		
Eng. Draft		
Elec. Draft		
Estimating		
Order Dept		
YARD DISTRIBUTION: Structural	5	5
Pc. Rate		
Mold Loft	1	1
Carpenter Shop		
Outfit. Office	2	2
Outfit. No. 1 Pier	3	3
Outside Mach.	5	
Rigging		
Material	1	1
Pipe Shop		
Pipe Draft	2	2
Sheet Metal		
Boiler Shop		
Paint Shop		
Machine Shop		
Smith Shop		
Elec. Shop		
Hopeman Yard		
Warehouse		
MISC.		
TOTAL	21	21

H-4423-26

HULL NO	M.C. NO	NAME	CHARGE
4431	2456		H-4430
4430	2455		H-4430
4426	1682		H-4423
4425	1681		"
4424	1680		"
4423	1679		H-4423
4390	528		H-4386-SM-37
4389	527		
4388	526		
4387	525		
4386	524		H-4386-SM-37
4385	523		H-4382-SM-37
4384	522		
4383	521		
4382	520		H-4382-SM-37
4381	519		H-4378-SM-37
4380	518		
4379	517		
4378	516		H-4378-SM-37
4375			H-4374
4374			H-4374
4373			H-4373
4368			H-4367

CHARGE: H-4367 JOB NO 124 DECK STRUCT 125 ACCESS TRUNKS

DATE ISSUED
DEPT.
ORDER
OWNERS
AM. BUREAU
U.S.M.C.
LLOYDS
BU. OF M. INSP.
INSPECTORS
HULL DRAFT'G
ENG. DRAFT'G
ELECT. DRAFT'G
STRUCTURAL
MOLD LOFT
OUTFITTING
CARPENTER
PATTERN
MACHINE
SMITH
BOILER
SHEET METAL
ELECTRIC SHOP
PAINT
PIPE
HOPEMAN
WAREHOUSE
ALTERATION
TOTAL

HAD TO HAH
HBD-HBB-HBR

BETHLEHEM-SPARROWS POINT SHIPYARD, INC.
SPARROWS POINT, MD.

H-4367-12-37

~~BETHLEHEM STEEL COMPANY~~
~~SHIPBUILDING DIVISION~~ ~~SPARROWS POINT, MD.~~

UPPER DECK PLATING FOR'D END

SCALE 1/4" = 1 FT DATE JAN. 6, 1941
DRAWN K. FORD APPROVED
TRACED APPROVED
CHECKED APPROVED 917

GROUP 4

.STANVAC CALCUTTA. *

BETH'LEM YD NO.4424

UPPER DECK PLATING MIDSHIPS

9

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Lloyd's Register
Foundation

010777-010782-0002

ATTACHMENT OF LONGL'S IN COFFERDAM
SECTION B-B
DETAIL OF OIL STOPPER
WELDING DETAILS OF SHEER STRAKE & STRINGER 'A'
TYPICAL DETAIL OF LONGL'S ATTACHMENT TO O.T. BHDS.
SECTION THRU O.T. HATCHES
DETAIL OF O.T. HATCH COAMING CONNECTION TO DECK
TYPICAL LOCATION OF HATCHES
SECTION A-A
SECTION C-C
ATTACHMENT OF LONGL'S IN COFF.
BRIDGE
FRAME SPACING 12'-2"
12'-2" FR. SPACING
4'-0"
6'-9"
DETAIL OF OIL STOPPER IN WAY OF SEAMS
SHELL OR DECK
FLANGE OF L
SECTION "Z-Z"
SECTION "X-X" SIMILAR
¢ OF SHIP
UDB-12

NOTE: CONNECTIONS FOR WALK WAY SUPPORTS, SCUPPERS, MASTS, KING POSTS, BITTS, CHOCKS, FAIR LEADS ETC. WILL BE LOCATED LATER.

UPPER DECK PLATING

ALL LONGITUDINALS - 9" x 3½ x 23.8# B.A. UDL-47-68, UDL-68-71, UDLA-68-71

SCALE ~ ¼" = 1 FT.

FOR H-4367, 68, 73, 74 & 75 - SEE H-4367-12-31
H-4378-79-80 & 81

REFERENCES

FOR TYPICAL TRANS. FRAME	H-4367-12-11
FOR TYPICAL TRANS. O.T. BHD.	H-4367-12-18
FOR TYPICAL LONG'L. O.T. BHD.	H-4367-12-26
FOR DETAILS OF RIVETING & WELDING	H-4367-12-34

MATERIAL ORDERED
PLATE SHEET NO. 69-70-71
SHAPE SHEET NO. 289-82-206

FOR ALTERATIONS TO SUIT NAVY CONVERSION SEE DWGS
H-4378-12-139
" " 163
" " 156
" " 156A

APPROVED
DEC 21 1945
LLOYD'S REGISTER OF SHIPPING
NEW YORK

	Approved by	Date
H-4378 TO 4390 INC.	AMERICAN BUREAU OF SHIPPING	JUNE 30, 1942
H4378 TO H4390 INC.	U.S. MARITIME COMMISSION	DEC 3, 1941 FILE NO 511-6(H)
H4374 H4375	UNION OIL CO. OF CALIFORNIA	SEPT. 16, 1941
	AMERICAN BUREAU OF SHIPPING	SEPT 15, 1941
H 4367 H 4368 H 4373	STANDARD OIL OF N.J.	DEC. 19, 1940
	AMERICAN BUREAU OF SHIPPING	NOV. 9, 1940
	APPROVED BY	DATE

ALTERATION

Nº	DESCRIPTION	DATE	MADE BY	APPV'D U.S.M.C.	APPV'D A.B.S.
I	DUPLICATE FOR H-4374-75	8-14-41	F.F.M.		
II	DUPLICATED FOR H-4378 TO H-4390	11-13-41	R.C.H.		
III	UPPER DECK LONG'LS IN WAY OF O.T. CARGO HATCHES CUT AND BRKTS. FITTED. FOR ALL HULLS	2-4-42	H.S.W. UA32	2-19-42 511-6(H)	
IV	DETAIL OF DK. SCUPPERS ADDED FOR HULLS 4382 TO 4390 ONLY	6-19-42	K.F.		6-30-42
V	NOTE APPLYING TO NAVY CONVERSION OF HULLS 4378 TO 82 INC. ADDED	10/14/42	J.L.H.		
VI	DUPLICATE FOR H-4423-26	7-1-43	KHJ		
VII	DUPLICATION ADDED FOR HULLS 4430 & 4431	5-16-44	DEB		

RIVETING SCHEDULE

CONNECTION	DIA RIV.	SPACING DIAS	SPACING INCH
6" SEAMS	1"	3¾	3¾"
LONGITUDINALS	1"	6	6"
LONGITUDINAL ENDS AS SHOWN	1"		

MATERIAL ORDERED
H-4367 & 4368
H-4373 TO 4375
H-4378 TO 4390
PLATE SHEET NO. 69-70-71
SHAPE SHEET NO. 39-40-279

WELDING SYMBOLS

LOCATION	FILLET WELD	BUTT WELD REINFORCEMENT	BUTT WELD BEVEL
NEAR SIDE			
FAR SIDE			
BOTH SIDES			

SIZE OF A 45° FILLET WELD IS THE NOMINAL LENGTH OF LEG.
ALL WELDS CONTINUOUS UNLESS OTHERWISE STATED.
SIZE OF CONTINUOUS FILLET WELDS INDICATED THUS: 3/8" 1/2"
SIZE, LENGTH, AND ¢ TO ¢ SPACING OF INCREMENTS OF CHAIN INTERMITTENT WELDING INDICATED THUS 3/8"-2"-6" OF STAGGERED 1/2"-3"-8"-S
ALL REINFORCEMENTS ON BUTT WELDS TO BE 25% OF PLATE THICKNESS UNLESS OTHERWISE STATED.
INCLUDED ANGLE OF BEVEL, OPENING AT ROOT AND LOCATION OF REINFORCEMENT AND BEVEL INDICATED THUS: 60°
FIELD WELD, WELD ALL AROUND,
— METAL ARC WELDING TO BE USED UNLESS OTHERWISE STATED —

GENERAL NOTES

1. FOR DETAILS OF WELDING & RIVETING SEE DWG H-4367-12-34
2. DECK TO BE OILTIGHT.
3. SIGHT EDGES OF ALL PLATES TO BE PLANED FOR CAULKING.
4. ALL LONG'LS. TO HAVE 2"x1" DRAIN & VENT HOLES SPACED AB'T. 18" CTRS. PUNCHED CLOSE TO BOSOM OF BAR IN OIL SPACE.
5. RIVET HOLES, EXCEPT TACK HOLES, TO BE DRILLED FULL SIZE IN ONE FAYING MEMBER IN SHOP, IN OTHER MEMBER ON SHIP. TACK HOLES TO BE DRILLED ONE SIZE UNDER & REAMED AFTER ASSM.

H-4423-26

	HULL No.	M.C. No.	NAME	CHARGE
VII	4431	2456		H-4430
	4430	2455		H-4430
VI	4426	1682		H-4423
	4425	1681		"
	4424	1680		
	4423	1679		H-4423
II	4390	528		H-4386 - SM30
	4389	527		
	4388	526		
	4387	525		
	4386	524		H-4386 - SM30
	4385	523		H-4382 - SM30
	4384	522		
	4383	521		
	4382	520		H-4382 - SM30
V	4381	519		H-4378 - SM30
	4380	518		
	4379	517		
	4378	516		H-4378 - SM30
I	4375			H-4374
	4374			H-4374
	4373			H-4373
	4368			H-4367

CHARGE: H-4367 JOB No. 124.

BETHLEHEM-SPARROWS POINT SHIPYARD, INC.
SPARROWS POINT, MD.

H-4367-12-35

~~BETHLEHEM STEEL COMPANY~~
~~SHIPBUILDING DIVISION~~ ~~SPARROWS POINT, MD.~~

UPPER DK. PLTG. (MIDSHIPS)

SCALE AS NOTED DATE Nov. 6 1940
DRAWN K.W. FORD APPROVED
TRACED APPROVED
CHECKED APPROVED 20.00

HAD TO HAH
HAT TO HAW-1
HBP

DEPT.
ORDER
OWNERS
AM. BUREAU
U.S.M.C.
LLOYDS
BU. OF M. INSP.
INSPECTORS
HULL DRAFT'G
ENG. DRAFT'G
ELECT. DRAFT'G
STRUCTURAL
MOLD LOFT
OUTFITTING
CARPENTER
PATTERN
MACHINE
SMITH
BOILER
SHEET METAL
ELECTRIC SHOP
PAINT
PIPE
HOPEMAN
WAREHOUSE
ALTERATION
TOTAL

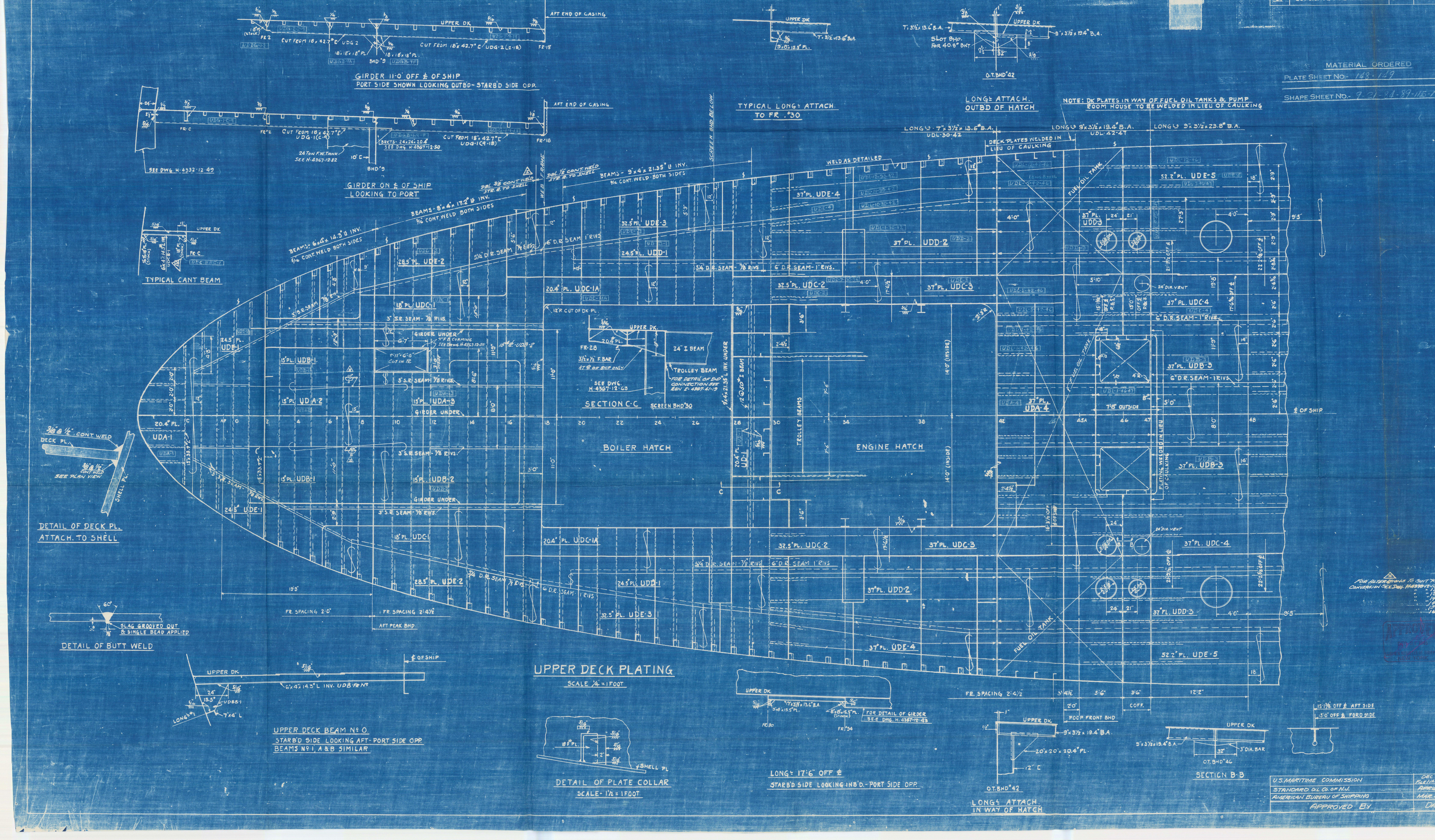
"STANVAC CALCUTTA." *

BETH'LEM YD NO. 4424

UPPER DECK PLATING AFT END

(10)

010777-010782-0003


GIRDER 11'-0" OFF ℄ OF SHIP
PORT SIDE SHOWN LOOKING OUTBD - STARB'D SIDE OPP.
GIRDER ON ℄ OF SHIP LOOKING TO PORT
TYPICAL CANT BEAM
TYPICAL LONG'L ATTACH TO FR. 30
LONG'L ATTACH. OUTBD OF HATCH
NOTE: DK PLATES IN WAY OF FUEL OIL TANKS & PUMP ROOM HOUSE TO BE WELDED IN LIEU OF CAULKING
DECK PLATES WELDED IN LIEU OF CAULKING
UPPER DK
AFT END OF CASING
O.T. BHD 42
SECTION C-C
BOILER HATCH
ENGINE HATCH
TROLLEY BEAMS
FUEL OIL TANK
℄ OF SHIP
DETAIL OF DECK PL. ATTACH. TO SHELL
DETAIL OF BUTT WELD
UPPER DECK PLATING
SCALE 1/4" = 1 FOOT
UPPER DECK BEAM Nº 0
STARB'D SIDE LOOKING AFT - PORT SIDE OPP.
BEAMS Nº 1, A & B SIMILAR
DETAIL OF PLATE COLLAR
SCALE - 1 1/2" = 1 FOOT
LONG'L 17'-6" OFF ℄
STARB'D SIDE LOOKING INB'D - PORT SIDE OPP.
LONG'L ATTACH IN WAY OF HATCH
SECTION B-B
15'-1 3/8" OFF ℄ AFT SIDE
15'-0" OFF ℄ FORD SIDE
3" DIA. BAR
FOR ALTERATIONS TO SUIT NAVY CONVERSION SEE DWG. H4378-12-137, 138, 139, 144, 149, 150, 167

ALTERATIONS

Nº	DESCRIPTION	DATE	MADE BY	APPR'D
VI	DUPLICATE FOR H-4423-26	7-1-43	KHJ	

ALTERATIONS

Nº	DESCRIPTION	DATE	MADE BY	APPROVED BY
I	WELDING OF STRINGER B. TO SHELL CHANGED TO SUIT OWNERS COMMENTS OF MARCH 25, 1940	3-31-41	K.F.	
II	3" S.R. SEAM CHANGED TO WELDED BUTT IN WAY OF REFRIGERATED SPACE	7-3-41	E.M.	AM. BU. OF S. 7-10-41 S.O.-N.J. 7-9-41
III	DUPLICATED FOR H-4378 TO H-4390	11-21-41	D.M.S.	
IV	CANT BEAMS CHANGED FROM 6"×3 1/2"×13.5# ∠s TO 6"×4"×14.3# ∠s. ON ALL HULLS EXCEPT H-4367 & 4373	12/23/41	E. H. C.	
V	NOTE APPLYING TO NAVY CONVERSION OF HULLS 4378 TO 82 INC. ADDED	10/19/42	J.H.H.	
VI	DUPLICATION ADDED FOR HULLS 4430 & 4431	5-16-44	DEB	

MATERIAL ORDERED

PLATE SHEET No.- 148-149

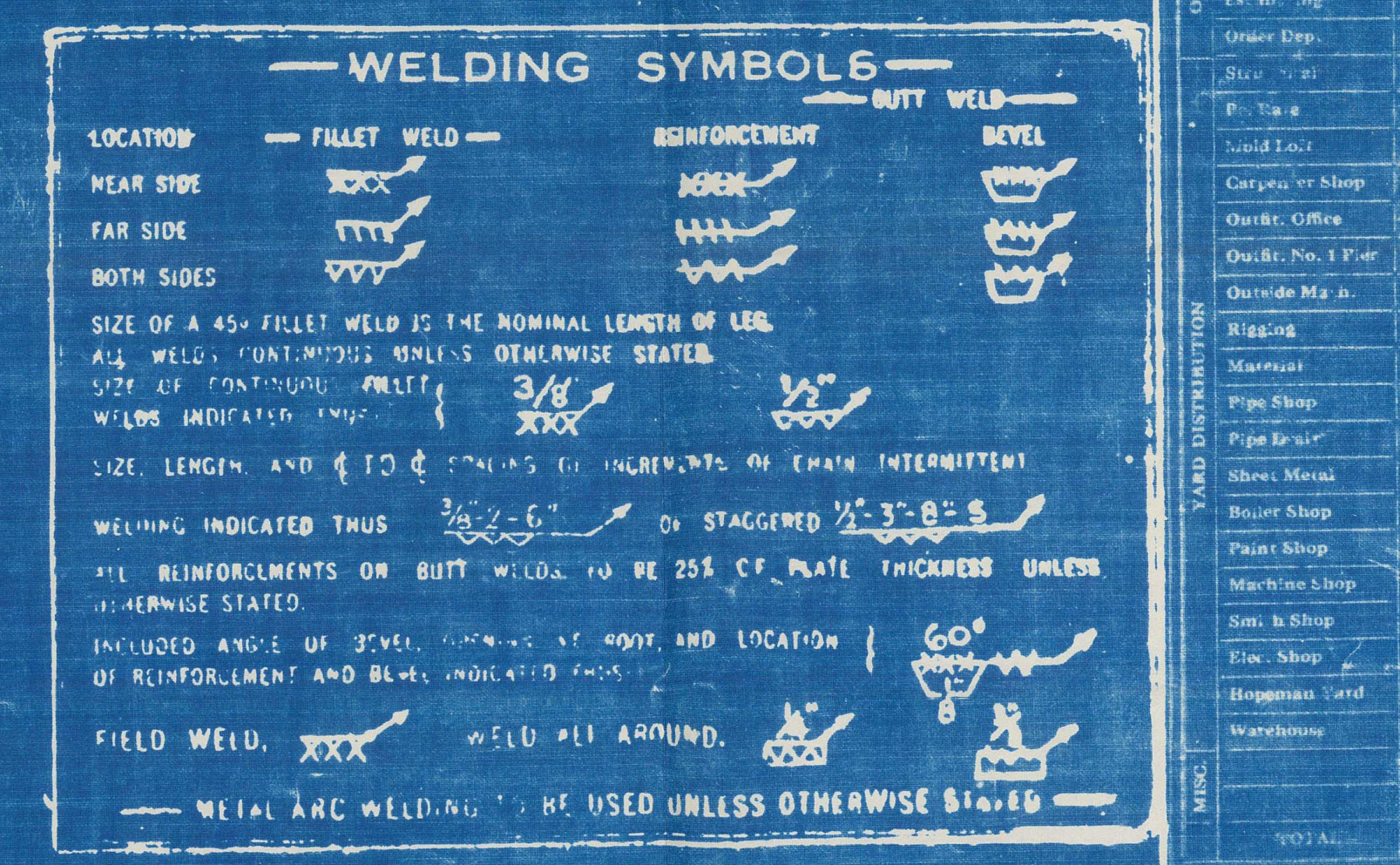
SHAPE SHEET No.- 9-21-84-89-115-126

PLATE SHEET No.- 148-149 (4367-68, 4373-75, 4378-90)

SHAPE SHEET No.- 92-96-101

RIVETING SCHEDULE

CONNECTIONS		DIA. RIV.	SPACING DIAS.	SPACING INCH
ALL SEAMS FORD OF O.T. BHD 42	DBL. ROW	1"	3 3/4	3 3/4"
6" SEAMS AFT OF O.T. BHD 42	" "	1"	4 1/2	4 1/2"
5 1/4" SEAMS	" "	7/8"	4 1/2	4"
3" SEAMS	SINGLE ROW	7/8"	4 1/2	4"
LONGITUDINALS		1"	6	6"
LONG'LS AT ENDS IN WAY OF BHDS. 7 SPACES @ 3 1/2 DIA.				



DATE OF ISSUE

ALTERATION / DEPT.		
Owners		
Amer. Bur.		
Lloyd's R. S.		
U. S. M. C.		
U. S. Navy		
U. S. C. G.		
Hopeman N. S.		
Vendor		
Owner's Insp.		
Am. Bu. Insp.		
Lloyd's R. S.		
U. S. M. C. Insp.	1	1
U. S. Navy Insp.		
U. S. C. G. Insp.		
Hull Str. Draft	1	1
Hull Out. Draft		
Eng. Draft		
Elec. Draft		
Estimating		
Order Dep.		
Structural	5	5
[illegible]		
Mold Loft	1	1
Carpenter Shop		
Outfit. Office	2	2
Outfit. No. 1 Pier	3	2
Hopeman Yard		
Warehouse		
TOTAL	21	[illegible]

H-4423-26

~ GENERAL NOTES ~

1. FOR DETAILS OF WELDING & RIVETING SEE DWG. H-4367-12-34
2. SIGHT EDGES TO BE PLANED FOR CAULKING IN WAY OF RIV. JOINTS.
3. DECK TO BE OILTIGHT FOR'D. OF BHD. 42
4. ALL LONG'LS TO HAVE 2"×1" DRAIN & VENT HOLES SPACED ABT. 18" CTRS., PUNCH CLOSE TO BOSOM

Alt.	HULL Nº	M.C. Nº	NAME	CHARGE
VI	4431	2456		H-4430
VI	4430	2455		H-4430
VI	4426	1682		H-4423
VI	4425	1681		"
VI	4424	1680		"
VI	4423	1679		H-4423
III	4390	528		H-4386-SM-37
III	4389	527		
III	4388	526		
III	4387	525		
III	4386	524		H-4386-SM-37
III	4385	523		H-4382-SM-37
III	4384	522		
III	4383	521		
III	4382	520		H-4382-SM-37
III	4381	519		H-4378-SM-37
III	4380	518		
III	4379	517		
III	4378	516		H-4378-SM-37
II	4373			H-4373
II	4368			H-4367

CHARGE: H-4367 JOB Nº 124

APPROVED
DEC 2 1945
LLOYD'S REGISTER OF SHIPPING
NEW YORK

DEPT.

DATE ISSUED

DEPT.	
ORDER	
OWNERS	
AM. BUREAU	
U.S.M.C.	
LLOYDS	
BU. OF M. INSP.	
INSPECTORS	
HULL DRAFT'G	
ENG. DRAFT'G	
ELECT. DRAFT'G	
STRUCTURAL	
MOLD LOFT	
OUTFITTING	
CARPENTER	
PATTERN	
MACHINE	
SMITH	
BOILER	
SHEET METAL	
ELECTRIC SHOP	
PAINT	
PIPE	
HOPEMAN	
WAREHOUSE	
ALTERATION	
TOTAL	

BETHLEHEM-SPARROWS POINT SHIPYARD, INC.
SPARROWS POINT, MD.

H-4367-12-36

~~BETHLEHEM STEEL COMPANY~~
~~SHIPBUILDING DIVISION~~ ~~SPARROWS POINT, MD.~~

UPPER DECK PLATING
AFTER END

SCALE 1/4" & 1/2" = 1'-0"		DATE MAR. 20, 1941	
DRAWN K. FORD		APPROVED	
TRACED		APPROVED	
CHECKED		APPROVED	14.17

APPROVED BY	DATE
U.S. MARITIME COMMISSION	DEC. 5, 1941 FILE Nº S11-6-(H)
STANDARD OIL Co. OF N.J.	APRIL 8, 1941
AMERICAN BUREAU OF SHIPPING	MAR. 27, 1941

,STANVAC CALCUTTA ✱

BETH'LEM YD NO. 4424

POOP DECK PLATING

11

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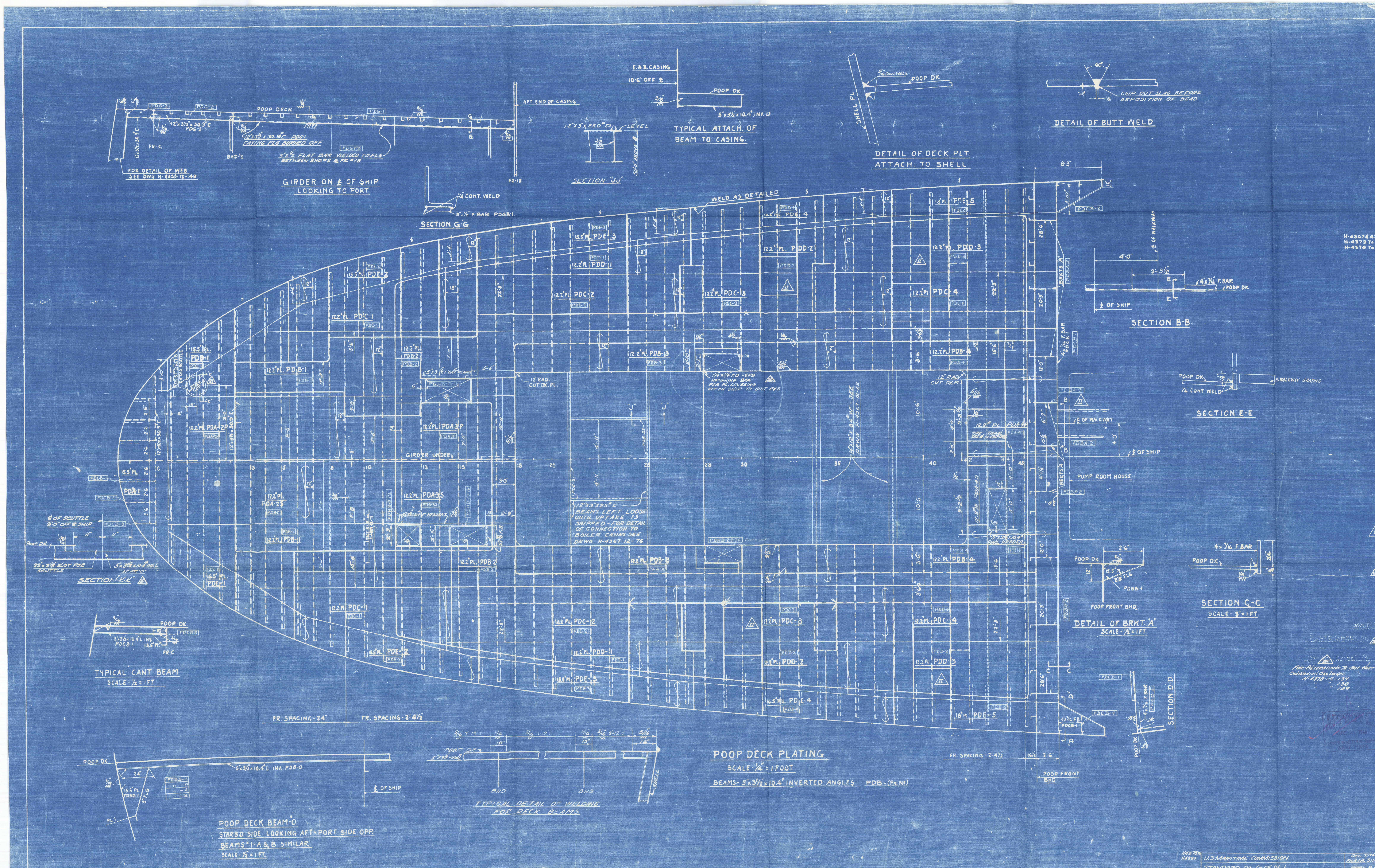


POOP DECK PLATING

SCALE - 1/4" = 1 FOOT

BEAMS - 5"x3 1/2"x10.4# INVERTED ANGLES PDB-(Fr. No.)

ALTERATIONS

No.	DESCRIPTION	DATE	MADE BY
I	BEAM IN WAY OF DECK SCUTTLE AT FR. "O" ALTERED TO SUIT OWNERS COMMENTS OF MAR. 25, 1941	4-2-41	K.F.
II	7"x1/4" F. BAR COAMING ADDED AROUND SHOWER AND BATH BHDS AND LOCATION OF "A" BRKTS REVISED AT FOR'D END	5-10-41	JAN
III	DUPLICATED FOR H-4378 TO H-4390	11-18-41	R.C.H.
VI	24" W.T. SCUTTLE RELOCATED FROM STB'D TO PORT SIDE TO CLEAR LUX BOTTLE-ENCLOSURE	3-17-42	H.S.W. UA32
VII	RETAINING BAR FOR FLOOR COVERING ADDED IN WAY OF STAIRWELL AT FR. 28	5-11-42	W.H.W.
VIII	NOTE APPLYING TO NAVY CONVERSION FOR HULLS 4378 TO 82 INC. ADDED	10-15-42	S.H.H.
IX	DUPLICATE FOR H-4423-26	7-2-43	KHS
X	DUPLICATION ADDED FOR HULLS 4430 & 4431	5-17-44	DEB

APPROVED BY		
OWNERS	A.B.S.	LLOYDS

MATERIAL ORDERED

PLATE SHEET NO.- 146-147

SHAPE SHEET NO.- 29-33-134-137-275-277

MATERIAL ORDERED

H-4367 & 4368
H-4373 TO 4375
H-4378 TO 4390

PLATE SHEET NO.- 146-147

SHAPE SHEET NO.- 82-93-94-123-124-269

—WELDING SYMBOLS—

LOCATION	FILLET WELD	BUTT WELD: REINFORCEMENT	BUTT WELD: BEVEL
NEAR SIDE			
FAR SIDE			
BOTH SIDES			

SIZE OF A 45° FILLET WELD IS THE NOMINAL LENGTH OF LEG.
ALL WELDS CONTINUOUS UNLESS OTHERWISE STATED.
SIZE OF CONTINUOUS FILLET WELDS INDICATED THUS: 3/8" 1/2"
SIZE, LENGTH, AND ℄ TO ℄ SPACING OF INCREMENTS OF CHAIN INTERMITTENT WELDING INDICATED THUS 3/8"-2"-6" OR STAGGERED 1/4"-3"-9"
ALL REINFORCEMENTS ON BUTT WELDS TO BE 25% OF PLATE THICKNESS UNLESS OTHERWISE STATED.
INCLUDED ANGLE OF BEVEL, OPENING AT ROOT, AND LOCATION OF REINFORCEMENT AND BEVEL INDICATED THUS: 60°
FIELD WELD, WELD ALL AROUND,
—METAL ARC WELDING TO BE USED UNLESS OTHERWISE STATED—

DEPT.		9-15-43	8-3-44
MAIL	Owners		
	Amer. Bur.		
	Lloyd's F. S.		
	U. S. M. C.	[illegible]	3
	U. S. Navy		
	U. S. C. G.		
	Hopeman N. Y.		
	Vendor		
INSPECTOR	Owner's Insp.		
	Am. Bu. Insp.		
	Lloyd's R. S.		
	U. S. M. C. Insp.	1	1
	U. S. Navy Insp.		
	U. S. C. G. Insp.		
OFFICE DIST.	Hull Str. Draft	1	1
	Hull Outfit. Draft		
	Eng. Draft		
	Elec. Draft		
	Estimating		
	Order Dept		
YARD DISTRIBUTION	Structural	5	5
	Pc. Rate		
	Mold Loft	1	1
	Carpenter Shop		
	Outfit. Office	2	2
	Outfit. No. 1 Pier	3	4
	Outside Mach.	5	1
	Rigging		
	Material	1	1
	Pipe Shop		
	Pipe Draft	2	2
	Sheet Metal		
	Boiler Shop		
	Paint Shop		
	Machine Shop		
	Smith Shop		
	Elec. Shop		
	Hopeman Yard		
	Warehouse		
MISC.			
	TOTAL	24	21

H-4423-26

Hull No.	M.C. No.	Name	Charge
4431	2456		H-4430
4430	2455		H-4430
4426	1682		H-4423
4425	1681		"
4424	1680		"
4423	1679		H-4423
4390	528		H-4386 - SM 37
4389	527		
4388	526		
4387	525		
4386	524		H-4386 - SM 37
4385	523		H-4382 - SM 37
4384	522		
4383	521		
4382	520		H-4382 - SM 37
4381	519		H-4378 - SM 37
4380	518		
4379	517		
4378	516		H-4378 - SM 37
4373			H-4373
4368			H-4367

CHARGE: H-4367 JOB No. 124

4378-90
H 4367-68-73
H 4378-90
H 4423-26
4367-68 } VII
4378-90 } VIII
4378-82 Plus VIII

DEPT.	DATE ISSUED: 3-21-41	4-2-41	5-14-41	12-10-41	3-20-42	3-20-42	[illegible]	5-12-42	5-12-42	10-22-42
ORDER										
OWNERS										
AM. BUREAU										
U.S.M.C.										
LLOYDS										
BU. OF M. INSP.										
INSPECTORS										
HULL DRAFT'G										
ENG. DRAFT'G										
ELECT. DRAFT'G										
STRUCTURAL										
MOLD LOFT										
OUTFITTING										
CARPENTER										
PATTERN										
MACHINE										
SMITH										
BOILER										
SHEET METAL										
ELECTRIC SHOP										
PAINT										
PIPE										
HOPEMAN										
WAREHOUSE										
ALTERATION										
TOTAL										

APPROVED
DEC. 21 1945
LLOYD'S REGISTER OF SHIPPING
NEW YORK

	H4378 TO H4390	
U.S. MARITIME COMMISSION		DEC. 5, 1941 FILE No. S11-6(H)
STANDARD OIL Co. OF N.J.		APRIL 8, 1941
AMERICAN BUREAU OF SHIPPING		MAR. 27, 1941
APPROVED BY		DATE

BETHLEHEM-SPARROWS POINT SHIPYARD, INC.
SPARROWS POINT, MD.

H-4367-12-48

~~BETHLEHEM STEEL COMPANY~~
~~SHIPBUILDING DIVISION~~ ~~SPARROWS POINT, MD.~~

POOP DECK PLATING

SCALE 1/4" = 1 FT. DATE MAR. 20, 1941
DRAWN J.A.N. APPROVED
TRACED APPROVED 12.50
CHECKED E.L. APPROVED

HAQ-HAR

GROUP 6

,STANVAC CALCUTTA, *

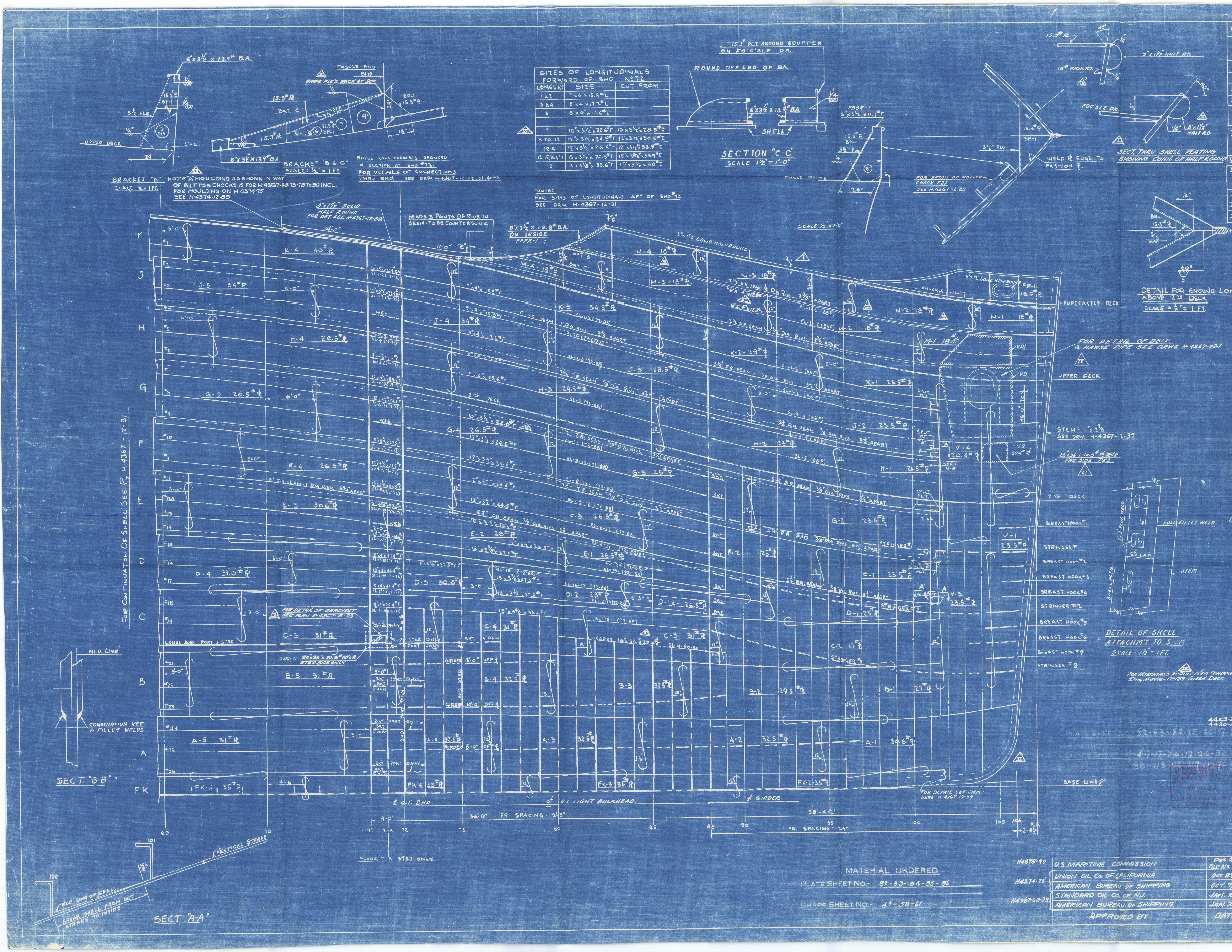
BETH'LEM YD NO. 4424

SHELL EXPANSION FORE END

(5)

AREA = 49 3/8" × 27" = 9.28

Nº	ALTERATION	DATE	MADE BY	APP'D
I	HEIGHT OF SHELL PLATING ABOVE MOLDED LINE OF FO'C'L DECK REV. TO SUIT OWNERS AND DET. OF CONN. OF HALF ROUND MOLDING ADDED	1-23-41	G.L.B.	
II	SKEG REMOVED FROM STEM - FLG. OF BKTS. "B" & "C" SNIPED BACK 30°	2-25-41	K.F.	
III	AIRPORTS DELETED TO SUIT OWNERS COMMENTS ON RAN.-H-4367-14-7	3-4-41	K.F.	
IV	HAWSE PIPE DBLR REVISED	4-25-41	JAN	
V	SEACHEST BETWEEN ~~FES~~ 71-71A ADDED.	8-21-41	K.F.	
VI	DUPLICATED FOR H-4374 & H-4375	9-25-41	D.E.B.	
V	DUPLICATED FOR H-4378 TO H-4390	11-21-41	D.M.S.	
VI	SIZE OF SHAPES CHANGED FROM 10"×3½"×26.6# [TO 10"×3½"×28.3# [& 6"×3½"×11.7# ⌐ TO 6"×4"×12.3# ⌐ FOR LONG'LS FL-1, FL-2, & 7 & HEADER BETW. FRS. #80 & #81. EXCEPT FOR H-4367 & H-4373.	12-17-41	E.H.C.	
VII	RESERVATION OF SEA CHEST DELETED. FOR HULLS 4374-75. NOTE "A" ADDED	3-12-42	H.S.W. UA32	
VIII	NOTES APPLYING TO NAVY CONVERSION FOR HULLS 4378 TO 82 INC. ADDED	10-15-42	J.H.H	
IX	3" × 1½" HALF RD. BAR MOVED TO TOP OF FASH. PLT. AT FWD. END OF FO'C'SLE DK. • SECT. ADDED SHOW. RELOCATION OF BREAST PT ABV FO'C'LE DK.	10-29-42	JM	
X	DUPLICATION FOR H-4423-26	7-1-43	KHJ	
XI	DBL'R PLT ADDED TO INSIDE OF SHELL PLTG P&S AS SHOWN	8/31/43	F.E.M.	
XII	DUPLICATION ADDED FOR HULLS 4430 & 4431	5-16-44	DEB	


6"×3½" × 13.9# B.A.
FOSCLE BHD
UPPER DECK
6"×3½"×13.9# B.A.
BRACKET "A" SCALE ½" = 1 FT.
BRACKET "B & C" SCALE: ½" = 1 FT.
NOTE "A" MOULDING AS SHOWN IN WAY OF BITTS & CHOCKS IS FOR H-4367-68-73-78 TO 90 INCL. FOR MOULDING ON H-4374-75 SEE H-4374-12-89
SHELL LONGITUDINALS REDUCED IN SECTION AT BHD #72. FOR DETAILS OF CONNECTIONS THRU BHD. SEE DRW. H-4367-12-22, 31, 86-40
SIZES OF LONGITUDINALS FORWARD OF BHD Nº 72
NOTE: FOR SIZES OF LONGITUDINALS AFT OF BHD #72 SEE DRW. H-4367-12-31
15.3# PLT AROUND SCUPPER ON FO'C'SLE DK.
ROUND OFF END OF B.A.
SECTION "C-C" SCALE 1½" = 1'-0"
SHELL
FOR DETAIL OF ROLLER CHOCK FDT. SEE H-4367-12-89
SCALE 1½" = 1'-0"
WELD ℄ EDGE TO FASHION ℄
SECT. THRU SHELL PLATING SHOWING CONN. OF HALF ROUND
3" × 1½" HALF RD.
DETAIL FOR ENDING LONGS ABOVE 2ND DECK SCALE = ½" = 1 FT.
3" × 1½" SOLID HALF ROUND FOR DET. SEE H-4367-12-89
HEADS & POINTS OF RIVS IN SEAM TO BE COUNTERSUNK
6"×3½"×13.9# B.A. ON INSIDE
FORECASTLE DECK
FOR DETAIL OF DBLR & HAWSE PIPE SEE DRWG. H-4367-22-1
UPPER DECK
STEM - 11"×2⅞" SEE DRW. H-4367-12-39
2ND DECK
BREASTHOOK #1
STRINGER #1
BREAST HOOK #2
BREAST HOOK #3
BREAST HOOK #4
STRINGER #2
BREAST HOOK #5
BREAST HOOK #6
BREAST HOOK #7
STRINGER #3
DETAIL OF SHELL ATTACHM'T TO STEM SCALE - 1½" = 1 FT.
FULL FILLET WELD
STEM
FOR ALTERATIONS TO SUIT NAVY CONVERSION SEE DWG. H-4378-12-139 TWEEN DECK
BASE LINE
FOR DETAIL SEE STEM DRWG. H-4367-12-39
FOR CONTINUATION OF SHELL SEE PL H-4367-12-31
K
J
H
G
F
E
D
C
B
A
FK
K-4 40# ℘
J-5 34# ℘
J-4 34# ℘
K-3 34.5# ℘
N-4 18# ℘
M-4 18# ℘
M-3 18# ℘
N-3 18# ℘
N-2 18# ℘
N-1 18# ℘
FP-1 18.0# ℘
M-1 18#
M-2 18# ℘
K-2 29# ℘
K-1 23.5# ℘
H-4 26.5# ℘
J-3 28.5# ℘
H-3 24.5# ℘
G-5 26.5# ℘
G-4 26.5# ℘
J-2 23.5# ℘
H-2 23# ℘
V-4 20.4# ℘
V-2 20.4# ℘
F-4 26.5# ℘
G-3 25# ℘
H-1 23.5# ℘
E-3 30.6# ℘
F-3 26.5# ℘
G-2 23.5# ℘
E-2 28# ℘
E-1 26.5# ℘
F-2 25# ℘
V-1 23.5# ℘
D-4 31.0# ℘
D-3 30.6# ℘
D-2 28# ℘
D-1A 26.5# ℘
F-1 23.5# ℘
A-3.5 ℘
D-1 25# ℘
C-5 31# ℘
C-4 31# ℘
C-3 31# ℘
C-2 27# ℘
B-5 31# ℘
B-4 32.5# ℘
B-3 ℘
B-2 29.5# ℘
B-1 27# ℘
A-5 31# ℘
A-4 32.5# ℘
A-3 32.5# ℘
A-2 32.5# ℘
A-1 30.6# ℘
FK-5 35# ℘
FK-4 35# ℘
FK-3 35# ℘
FK-2 35# ℘
FOR DETAIL OF SEACHEST SEE PLAN E-4367-12-23
LONGL BHD PORT & STBD
℄ O.T. BHD
℄ OIL TIGHT BULKHEAD.
℄ GIRDER
56'-0" FR. SPACING 23"
38'-4½"
FR. SPACING 24"
69 70 71 71-A 72 75 80 85 88 90 95 100 105 106 F.P. 2'-4½"
FLOOR 71-A STBD ONLY
M.D. LINE
COMBINATION VEE & FILLET WELDS
SECT. "B-B"
VERTICAL STRAKE
MLD LINE OF SHELL
BREAK SHELL FROM OUT STRAKE TO INSIDE
SECT. "A-A"

— WELDING SYMBOLS —

LOCATION — FILLET WELD — REINFORCEMENT — BUTT WELD — BEVEL
NEAR SIDE
FAR SIDE
BOTH SIDES

SIZE OF A 45° FILLET WELD IS THE NOMINAL LENGTH OF LEG.
ALL WELDS CONTINUOUS UNLESS OTHERWISE STATED.
SIZE OF CONTINUOUS FILLET WELDS INDICATED THUS: 3/8" 1/2"
SIZE, LENGTH, AND ℄ TO ℄ SPACING OF INCREMENTS OF CHAIN INTERMITTENT WELDING INDICATED THUS 3/8"-2"-6" OF STAGGERED 1/2"-3"-8" S
ALL REINFORCEMENTS ON BUTT WELDS TO BE 25% OF PLATE THICKNESS UNLESS OTHERWISE STATED.
INCLUDED ANGLE OF BEVEL, OPENING AT ROOT, AND LOCATION OF REINFORCEMENT AND BEVEL INDICATED THUS: 60° 1/8" 3/8"
FIELD WELD, WELD ALL AROUND, 1/4"
— METAL ARC WELDING TO BE USED UNLESS OTHERWISE STATED —

~ GENERAL NOTES ~

1. FOR DETAILS OF WELDING & RIVETING SEE DWG. H-4367-12-34 & 12-31
2. OBLONG DRAIN HOLES 2"×1" SPACED ABOUT 18" APART TO BE CUT IN ALL LONGITUDINALS IN OIL TANKS. 4'-0" SPACING ELSEWHERE.

H-4423-26

HULL Nº	M.C. Nº	NAME	CHARGE
4431	2456		H-4430
4430	2455		H-4430
4426	1682		H-4423
4425	1681		"
4424	1680		"
4423	1679		H-4423
4390	528		H-4386-SM-37
4389	527		
4388	526		
4387	525		
4386	524		H-4386-SM-37
4385	523		H-4382-SM-37
4384	522		
4383	521		
4382	520		H-4382-SM-37
4381	519		H-4378-SM-37
4380	518		
4379	517		
4378	516		H-4378-SM-37
4375			H-4374
4374			H-4374
4373			H-4373
4368			H-4367

CHARGE: H-4367 JOB Nº 123

4423-26
4430-35
PLATE SHEET NO. 82-83-84-85-86-87-88
SHAPE SHEET NO. 4-7-17-20-12-26-30-39
80-113-116-117-129-325

MATERIAL ORDERED
PLATE SHEET NO.- 82-83-84-85-86
SHAPE SHEET NO.- 49-50-61

	APPROVED BY	DATE
H4378-90	U.S. MARITIME COMMISSION	DEC. 5, 1941 FILE Nº S11-1(H)
H4374-75	UNION OIL CO. OF CALIFORNIA	OCT. 29, 1941
H4374-75	AMERICAN BUREAU OF SHIPPING	OCT. 7, 1941
H4367-68-73	STANDARD OIL CO. OF N.J.	JAN. 21, 1941
H4367-68-73	AMERICAN BUREAU OF SHIPPING	JAN. 21, 1941

APPROVED
21 1945
AMERICAN BUREAU OF SHIPPING
NEW YORK

BETHLEHEM-SPARROWS POINT SHIPYARD, INC.
SPARROWS POINT, MD.

H-4367-12 33

~~BETHLEHEM STEEL COMPANY~~
~~SHIPBUILDING DIVISION~~ ~~SPARROWS POINT, MD.~~

SHELL EXPANSION - FOR'D END

SCALE 1/4" = 1'-0" DATE JAN. 16, 1941
DRAWN J.A.N. APPROVED
TRACED APPROVED
CHECKED APPROVED 10.42

GROUP 4

DEPT.
ORDER
OWNERS
AM. BUREAU
U.S.M.C.
LLOYDS
BU. OF M. INSP.
INSPECTORS
HULL DRAFT'G
ENG. DRAFT'G
ELECT. DRAFT'G
STRUCTURAL
MOLD LOFT
OUTFITTING
CARPENTER
PATTERN
MACHINE
SMITH
BOILER
SHEET METAL
ELECTRIC SHOP
PAINT
PIPE
HOPEMAN
WAREHOUSE
ALTERATION

DEPT.
ORDER
OWNERS
AM. BUREAU
LLOYDS
BU. OF M. INSP.
INSPECTORS
HULL DRAFT'G
ENG. DRAFT'G
STRUCT
MOLD LOFT
SHIP REPAIR
CARPENTER
PATTERN
MACHINE
SMITH
BOILER
SHEET METAL
ELECTRIC
PAINT
PIPE
MAT'L EXP.

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.STANVAC CALCUTTA.*

BETH'LEM YD NO. 4424

SHELL EXPANSION MIDSHIPS

⑥

WELDING DETAILS OF SHEER STRAKE & STRINGER
DETAIL FOR WELDING OF BULKHEADS AND TRANSVERSES TO SHELL
MIDSHIPS
ENDS
SECTION B-B
SECTION A-A
BULKHEAD CONNECTION FOR 15 CHANNELS
BULKHEAD CONNECTION FOR BULB ANGLES
DETAIL OF SCUPPERS IN SHEER STRAKE
SECTION C-C
SECTION D-D
PLAN VIEW
ELEVATION
TANK No 5
TANK No 4
TANK No 3
TANK No 2
FR 65
FASHION PL. CONNECTION TO SHEERSTRAKE
FOR'D. BRIDGE CONN. SHOWN - AFT CONN. SIMILAR TO OPP. HAND
SCALE - 3/4" = 1'-0"

H4378 To H4390 Incl.	U.S. MARITIME COMMISSION	Dec. 3, 1941 File No S-11-1 (H)
H4374 H4375	UNION OIL CO. OF CALIFORNIA.	Sept. 16, 1941
	AMERICAN BUREAU OF SHIPPING.	Sept. 15, 1941
H4367 H4368 H4373	STANDARD OIL CO. OF N.J.	Dec. 19, 1940
	AMERICAN BUREAU OF SHIPPING.	Nov. 9, 1940.
	APPROVED BY	DATE

AREA = 27½ x 102½ = 19.6 SQ FT.

ALTERATION

No	DESCRIPTION	DATE	APPR'D.
I	BILGE KEEL REVISED TO SUIT OWNERS STR. PL TO SHELL WELD REV. TO SUIT AM. BU.	1-16-41 G.L.B.	AM. BUR. 1-20-41
II	HEIGHT OF SHEER STRAKE CHANGED FROM 66" TO 64¼" AS A CORRECTION	2-10-41 G.L.B.	AM. BUREAU 2-13-41 S.O. of N.J. 2-17-41
III	AIRPORTS DELETED TO SUIT OWNERS COMMENT ON PLAN H4367-14-7	3-4-41 K.F.	
IV	CONNECTION OF FASHION PL. TO SHEER STRAKE REVISED	5-12-41 K.F.	S.O. OF N.J. 5-5-41 · APP'D - AM. BU. SHIPG MAY 15, 1941
V	CONNECTION OF AFTER FASHION PL. TO SHEER STRAKE RELOCATED.	6-11-41 K.F.	
VI	THE EXTEND OF THE CSK. RIVETING IN SEAM AT AFT. BRIDGE BHD. CHANGED.	9-5-41 E.H.C.	
VII	DUPLICATED FOR H-4374-5	9-5-41 E.H.C	
VIII	DUPLICATE FOR HULLS 4378 TO 4390 (INCL) ADDED	11-13-41 D.M.S.	
IX	CUT OUTS ADDED TO BILGE KEEL	12-29-41 M.A.B.	
X	NOTE "A" ADDED	3-12-42 H.S.W.	
XI	NOTE FOR SCUPPERS ADDED	6-19-42 K.F.	
XII	LENGTH OF BILGE KEEL CHANGED FROM 182'-6" TO 75'-0" TO COMPLY WITH S.O.N.J. REQUEST. SEE USMC. LET. TO BETH. DATED JUNE 30 1942.	8-4-42 D.E.B.	
XIII	DIMENSIONS ADDED SHOWING EXTENT OF BILGE KEEL	4-12-43	
XIV	DUPLICATE FOR H-4423-26	7-1-43 KHJ	
XV	DUPLICATION ADDED FOR HULLS 4430 & 4431	5-16-44 DEB	
XVI	NOTE "A" ADDED, PERTAINING TO LONGL CONNS. AT BHDS. FOR H-4430-31	11/21/44 GLB.	

GENERAL NOTES

1. FOR DETAILS OF WELDING & RIVETING SEE DWG. H-4367-12-34
2. OBLONG DRAIN HOLES 2"x1" SPACED ABOUT 18" APART TO BE CUT IN ALL LONGLS. STARTING 4'-0" CLEAR OF O.T. BHDS. IN WAY OF WELDED BUTTS. SHELL & DECK FLANGES OF BULB ANGLE LONGLS. TO BE CUT AWAY. IN OTHER LONGLS. DRAIN HOLES TO BE LOCATED AT WELDED BUTTS. SEAMS OF BOTTOM PLATING STRAKES FK, A, B, C, D TO BE WELDED AS DETAILED

MATERIAL ORDERED

PLATE SHEET No.

SHAPE SHEET No.

METAL ARC WELDING TO BE USED UNLESS OTHERWISE STATED

HULL No	M.C. No	NAME	CHARGE
4431	2456		H-4430
4430	2455		H-4430
4426	1682		H-4423
4425	1681		"
4424	1680		"
4423	1679		H-4423
4390	528		H-4386-SM-37
4389	527		
4388	526		
4387	525		
4386	524		H-4386-SM-37
4385	523		H-4382-SM-37
4384	522		
4383	521		
4382	520		H-4382-SM-37
4381	519		H-4378-SM-37
4380	518		
4379	517		
4378	516		H-4378-SM-37
4375			H-4374
4374			H-4374
4373			H-4373
4368			H-4367

CHARGE H-4367 JOB No 123

APPROVED
DEC 21 1945
LLOYD'S REGISTER OF SHIPPING
NEW YORK

BETHLEHEM-SPARROWS POINT SHIPYARD, INC.
SPARROWS POINT, MD.

H-4367 - 12 - 31

~~BETHLEHEM STEEL COMPANY~~
~~SHIPBUILDING DIVISION~~ ~~SPARROWS POINT, MD.~~

SHELL EXPANSION - MIDSHIPS

SCALE ¼" = 1'-0" DATE Nov. 6, 1940
DRAWN JAN APPROVED
TRACED APPROVED
CHECKED APPROVED

GROUP 1 · 1A · 1B

. STANVAC CALCUTTA. *

BETH'LEM YD NO. 4424

SHELL EXPANSION AFT END

7

010777-010782-0005

Area = 27½" x 60" = 11.5 Sq. Ft.

Nº	DESCRIPTION	MADE BY	APP'D
VIII	LONG'L 12 MADE CONT. IN WAY OF SEA CHEST AFT OF BHD. 42 · HULLS 4374-56 4378 TO 4390 INCL.	1-30-42 H.S.W. UA32	
IX	NOTE "B" ADDED AS REQUESTED IN M.C. LETTER DATED FEB. 26, 1942. P.R. SEA CHEST P&S & OVER B'D DISC. FROM AUX. COND. PORT ONLY ADDED FOR H-4374-75 OTHER SEA CHEST SAME AS H-4367-68-73	3-7-42 H.S.W. UA32	
X	DBLR. FOR 24" SEACHEST AT FR. 38 INCREASED 12" IN LENGTH FOR H-4374 & 75	3-20-42 J.B.	
XI	WELDING ADDED IN WAY OF SHELL PLATING AND STERN FRAME	M.S. 6-2-46	

ALTERATIONS

Nº	DESCRIPTION	MADE BY	APP'D
I	HEIGHT OF SHELL PLATING ABOVE MOLDED LINE OF POOP DK REVISED TO 3" TO SUIT OWNERS AND DET. OF HALF RD. MOLDING CONN. TO SHELL ADDED	1-23-41 G.L.B.	
II	AIRPORTS DELETED TO SUIT OWNERS COMMENT ON RAN - H-4367-12-7	3-6-41 K.F.	
III	CONNECTION OF FASHION PL TO SHEERSTRAKE REVISED	5-19-41 K.F.	S.O. CO. OF NEW JERSEY 5-5-41
IV	SEACHESTS BETWEEN FRS. 14-15, 28-29, 29-30, 38-41, 39-42, & 45-46 ADDED DBL. PL'S ADDED IN WAY OF OVERBOARD DISCHARGE FITTINGS	8-11-41 K.F. 8-20-41 W.H.C.	
V	DUPLICATED FOR H-4374 & H-4375	9-25-41 DEB	
VI	DUPLICATED FOR H-4378 TO H-4390	11-19-41 D.M.S.	
VII	SIZE OF SHAPE CHANGED FROM 10" x 3½" x 26.6# C'S TO 10" x 3½" x 28.3# C'S FOR LONG'LS 8 & 9 FOR ALL HULLS EXCEPT H-4367 & 4373.	12-17-41 E.W.C.	
VIII	DUPLICATE FOR H-4423-26	7-1-43 K.H.J.	
IX	DUPLICATION ADDED FOR HULLS 4430 & 4431	5-16-44 DEB	

APP'D - AM. BU. SHIPP'G. MAY 15, 1941

PLATE SHEET No.- 77-78-79-80-81

SHAPE SHEET No.- 46-47-48-61-36

GENERAL NOTES

1. FOR DETAILS OF RIVETING & WELDING SEE DWG H-4367-12-34
2. OBLONG DRAIN HOLES 2" x 1" SPACED 18" APART TO BE CUT IN ALL LONG'LS IN OIL TANKS. 4'-0" SPACING ELSEWHERE

MATERIAL ORDERED (4423-26) (4430-35)

PLATE SHEET NO.- 77 TO 82 INCL.

SHAPE SHEET NO.- 4, 7, 11, 17, 20, 26, 30, 39, 45, 80, 81, 113, 116, 117, 126, 325

— WELDING SYMBOLS —

LOCATION	— FILLET WELD —	BUTT WELD REINFORCEMENT	BUTT WELD BEVEL
NEAR SIDE			
FAR SIDE			
BOTH SIDES			

SIZE OF A 45° FILLET WELD IS THE NOMINAL LENGTH OF LEG.
ALL WELDS CONTINUOUS UNLESS OTHERWISE STATED.
SIZE OF CONTINUOUS FILLET WELDS INDICATED THUS: 3/8" 1/2"
SIZE, LENGTH, AND ℄ TO ℄ SPACING OF INCREMENTS OF CHAIN INTERMITTENT WELDING INDICATED THUS 3/8"-2"-6" OR STAGGERED 1/2"-3"-8" S
ALL REINFORCEMENTS ON BUTT WELDS TO BE 25% OF PLATE THICKNESS UNLESS OTHERWISE STATED.
INCLUDED ANGLE OF BEVEL, OPENING AT ROOT, AND LOCATION OF REINFORCEMENT AND BEVEL INDICATED THUS: 60° 1/8"
FIELD WELD, WELD ALL AROUND, 1/4" 3/8"
— METAL ARC WELDING TO BE USED UNLESS OTHERWISE STATED —

H-4423-26

HULL Nº	M.C. Nº	NAME	CHARGE
4431	2456		H-4430
4430	2455		H-4430
4426	1682		H-4423
4425	1681		"
4424	1680		"
4423	1679		H-4423
4390	528		H-4386-SM-37
4389	527		
4388	526		
4387	525		
4386	524		H-4386-SM-37
4385	523		H-4382-SM-37
4384	522		
4383	521		
4382	520		H-4382-SM-37
4381	519		H-4378-SM-37
4380	518		
4379	517		
4378	516		H-4378-SM-37
4375			H-4374
4374			H-4374
4373			H-4373
4368			H-4367

CHARGE: H-4367 JOB Nº 123

APPROVED DEC 27 1945 LLOYD'S REGISTER OF SHIPPING NEW YORK

DEPT.	DATE ISSUED
ORDER	
OWNERS	
AM. BUREAU	
LLOYDS	
BU. OF M. INSP.	
INSPECTORS	
HULL DRAFT'G	
ENG. DRAFT'G	
STRUCT	
MOLD LOFT	
SHIP REPAIR	
CARPENTER	
PATTERN	
MACHINE	
SMITH	
BOILER	
SHEET METAL	
ELECTRIC	
PAINT	
PIPE	
MAT'L EXP.	

BETHLEHEM-SPARROWS POINT SHIPYARD, INC.
SPARROWS POINT, MD.

H-4367 - 12 -32

~~BETHLEHEM STEEL COMPANY~~
~~SHIPBUILDING DIVISION~~ ~~SPARROWS POINT, MD.~~

SHELL EXPANSION-AFTER END

SCALE ¼" = 1'-0" DATE NOV. 12, 1940
DRAWN J.A.N. APPROVED C.S.
TRACED APPROVED
CHECKED APPROVED

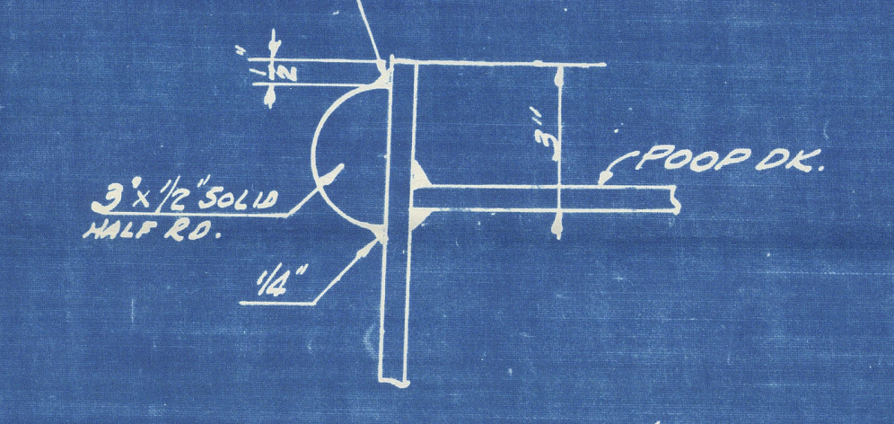
GROUP 2

H4378 TO 4390	U.S. MARITIME COMMISSION		DEC. 5, 1941 FILE Nº S11-1(H)
H4374-75	UNION OIL CO. OF CALIFORNIA		OCT. 29, 1941
	AMERICAN BUREAU OF SHIPPING		OCT. 7, 1941
H4367-68-73	STANDARD OIL CO. OF N.J.		DEC. 19, 1941
	AMERICAN BUREAU OF SHIPPING		NOV. 14, 1941
	APPROVED BY		DATE

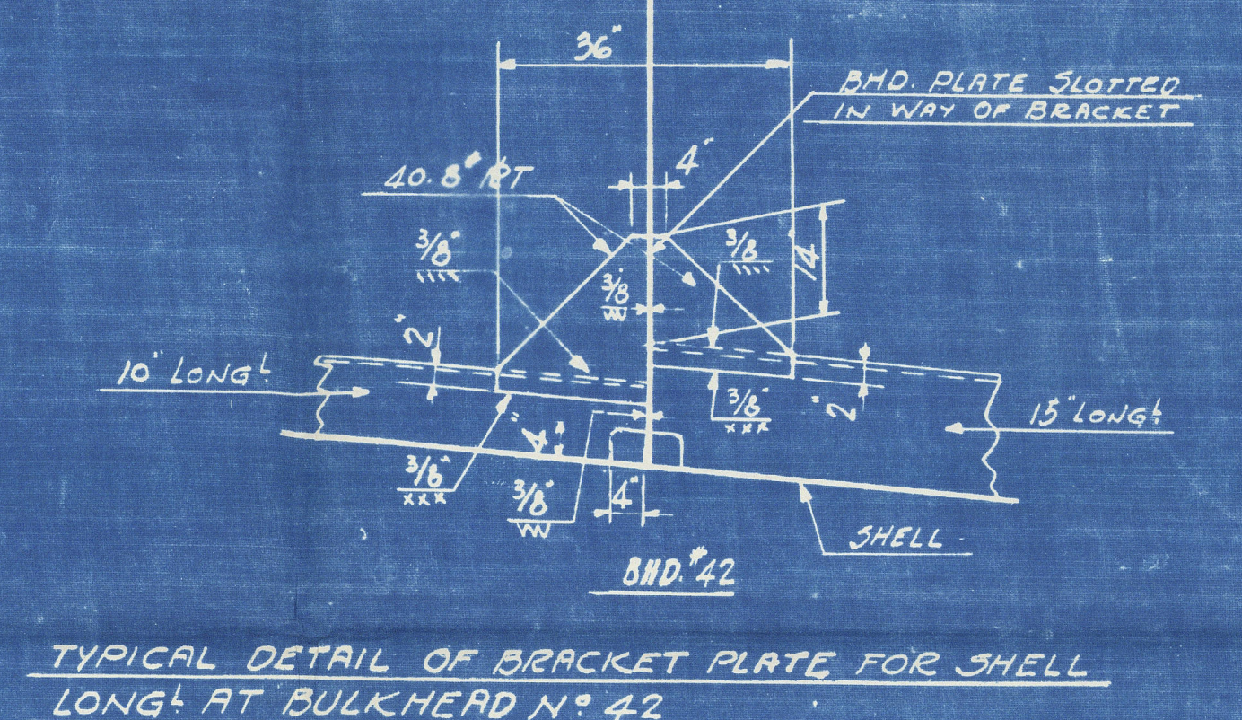
SIZES OF LONGITUDINALS AFT OF BULKHEAD Nº 42

LONG'L Nº	SIZE	CUT FROM
1 & 2	7" x 4" x 15.8# L	
3 & 4	8" x 4" x 17.2# L	
5 & 5A	8" x 4" x 19.6# L	
7	9" x 3½" x 17.5# Γ	9" x 3½" x 23.9# C
8 & 9	10" x 3½" x 22.6# Γ	10" x 3½" x 28.3# C
10, 11, & 12	12" x 3½" x 24.5# Γ	12" x 3½" x 30.9# C
13, 14 & 15	15" x 3⅜" 27.5# Γ	15" x 3⅜" x 33.9# C

NOTE:- FOR SIZES OF LONGITUDINALS FOR'D OF BHD. #42 SEE DRW. H-4367-12-31



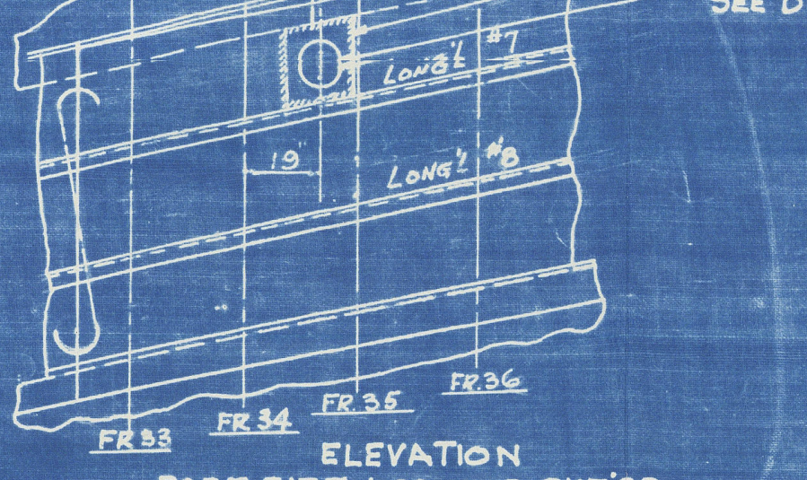
SECT. THRU SHELL PLATING SHOWING CONN. OF HALF ROUND



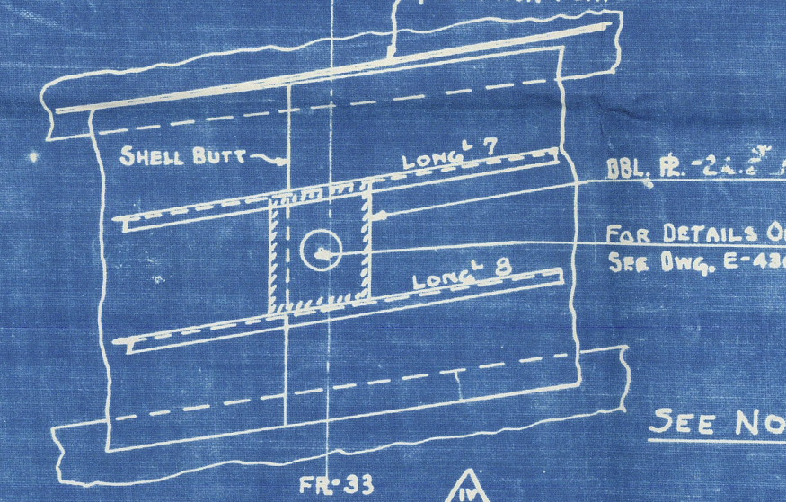
TYPICAL DETAIL OF BRACKET PLATE FOR SHELL LONG'L AT BULKHEAD Nº 42

FOR SIMILAR BRACKETS AT BULKHEAD Nº 42 SEE DRWG Nº H-4367-12-41

FOR SHELL LONG'L CONNECTIONS AT BULKHEADS ELSEWHERE SEE DRWG H-4367-12-31

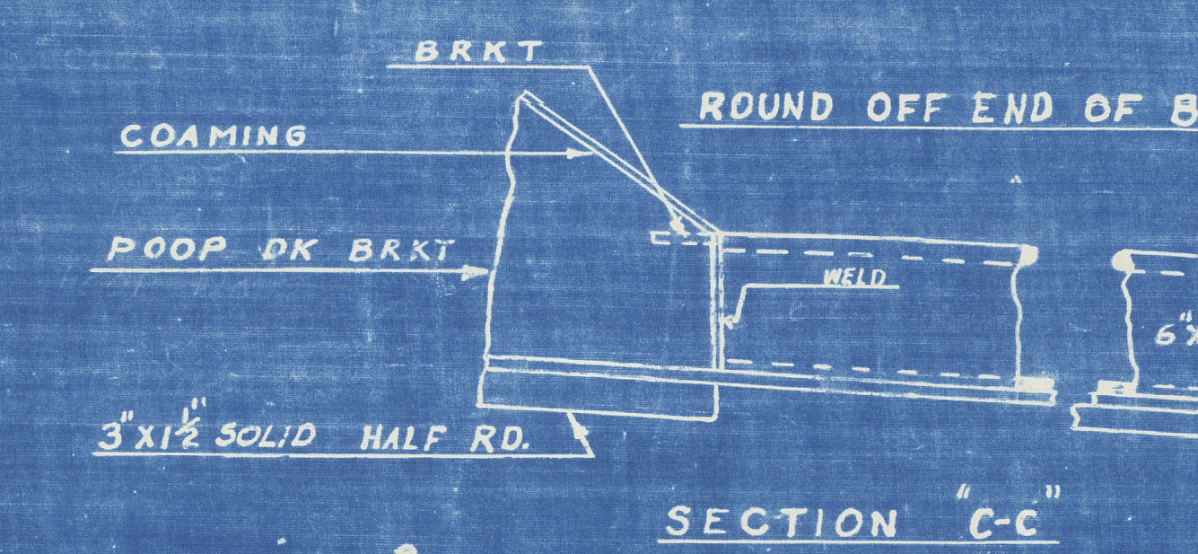


ELEVATION
PORT SIDE · LOOKING OUT'BD.
OVERBOARD DISC. FROM AUX. COND.
FOR HULLS 4374-75

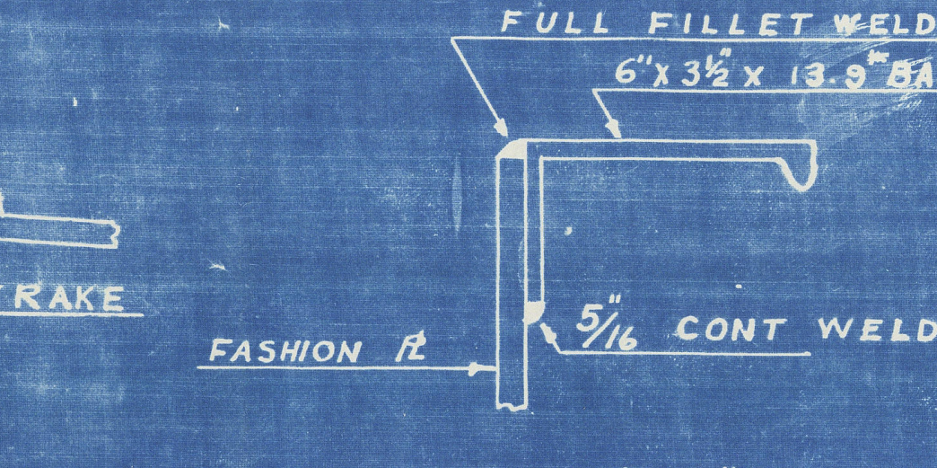


GENERATOR FLAT
SHELL BUTT
LONG'L 7
LONG'L 8
DBL. PL. -22.5# PORT ONLY
FOR DETAILS OF OPENING SEE DWG. E-4367-37-12
FR-33

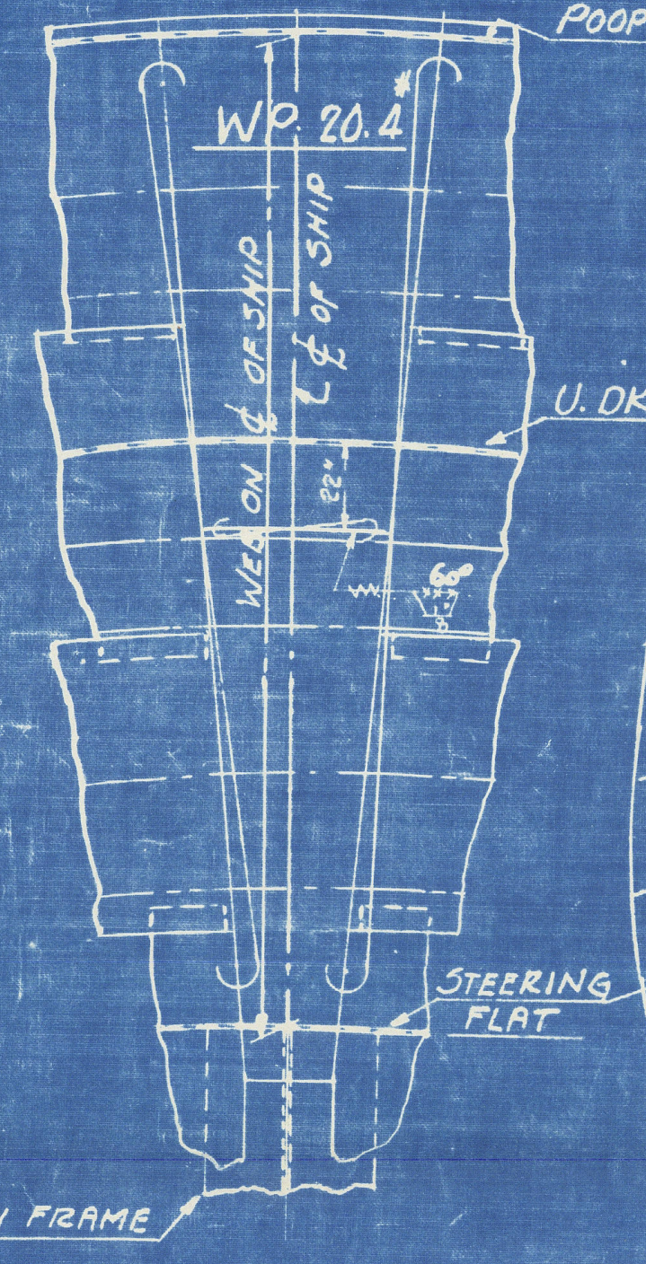
ELEVATION
PORT SIDE - LOOKING OUT'BD.
OVER BOARD DISC. FROM AUX. COND.
FOR HULLS-4367-68-73-4378 TO 90



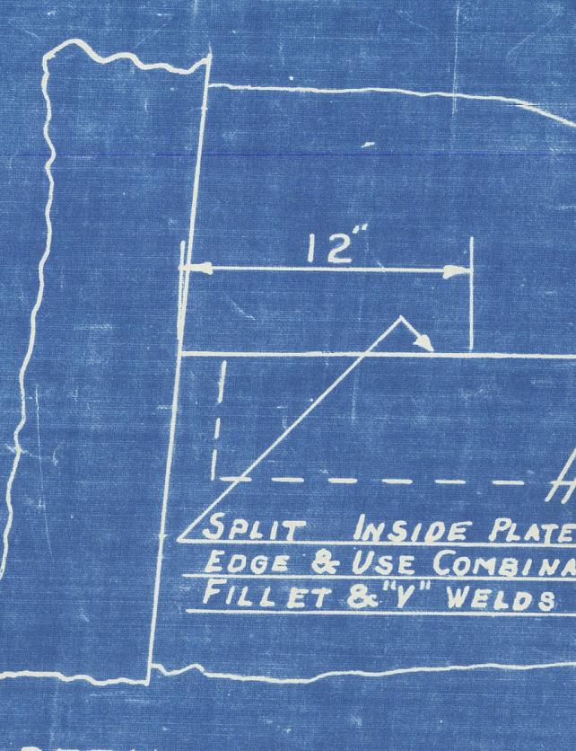
SECTION "C-C"



SECTION "D-D"

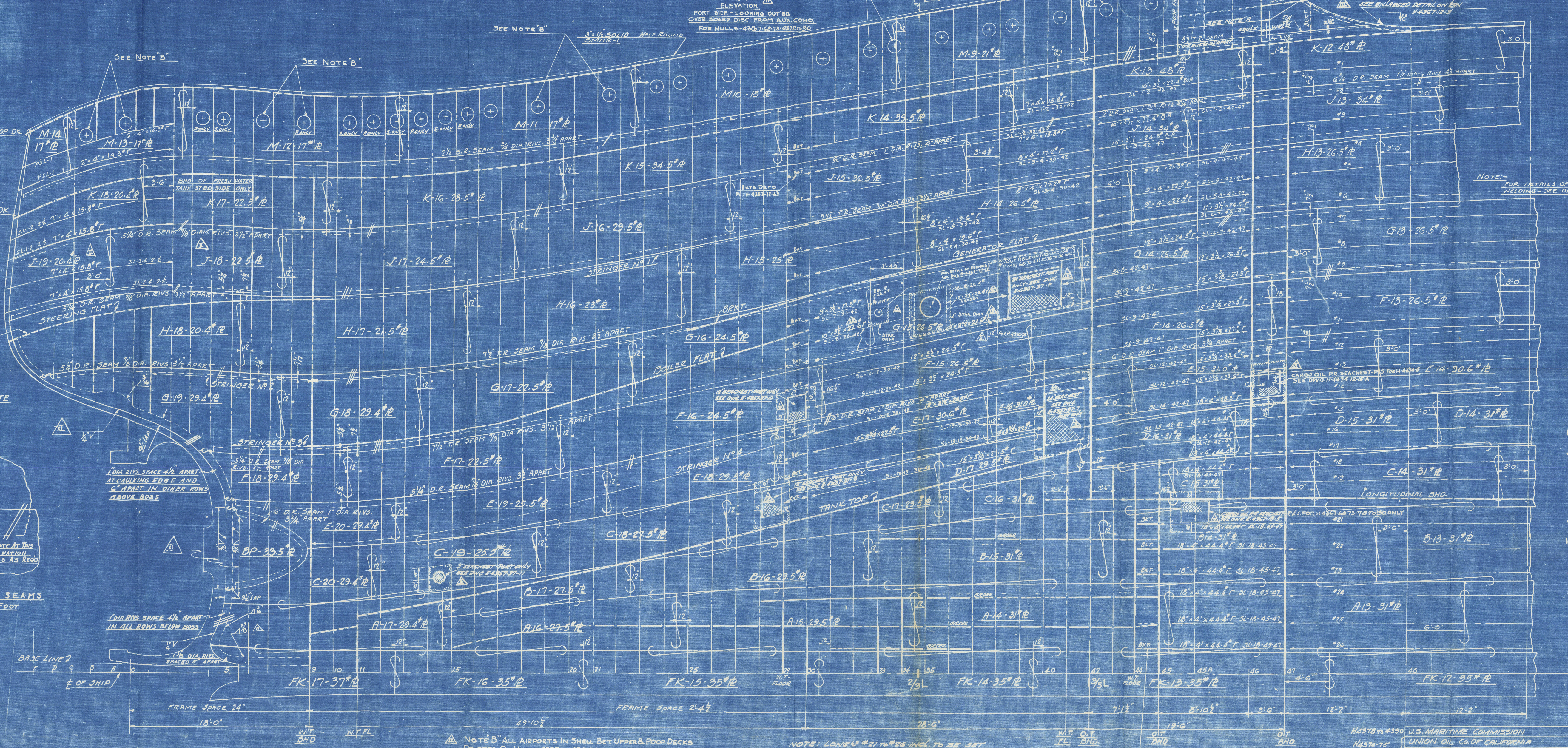


DETAIL OF APRON PLATE



12"
SPLIT INSIDE PLATE AT THIS EDGE & USE COMBINATION FILLET & "V" WELDS AS REQ'D

DETAIL OF END OF SEAMS
SCALE 1½" = 1 FOOT



FOR CONTINUATION SEE PL. 4367-12-31

NOTE:- FOR DETAILS OF RIVETING AND BUTT WELDING - SEE DRWG. H-4367-12-34

NOTE "B" ALL AIRPORTS IN SHELL BET. UPPER & POOP DECKS DELETED ON HULLS 4378 TO 4390 INCL.

NOTE: LONG'LS #21 TO #26 INCL. TO BE SET PERPENDICULAR TO BASE LINE THRUOUT

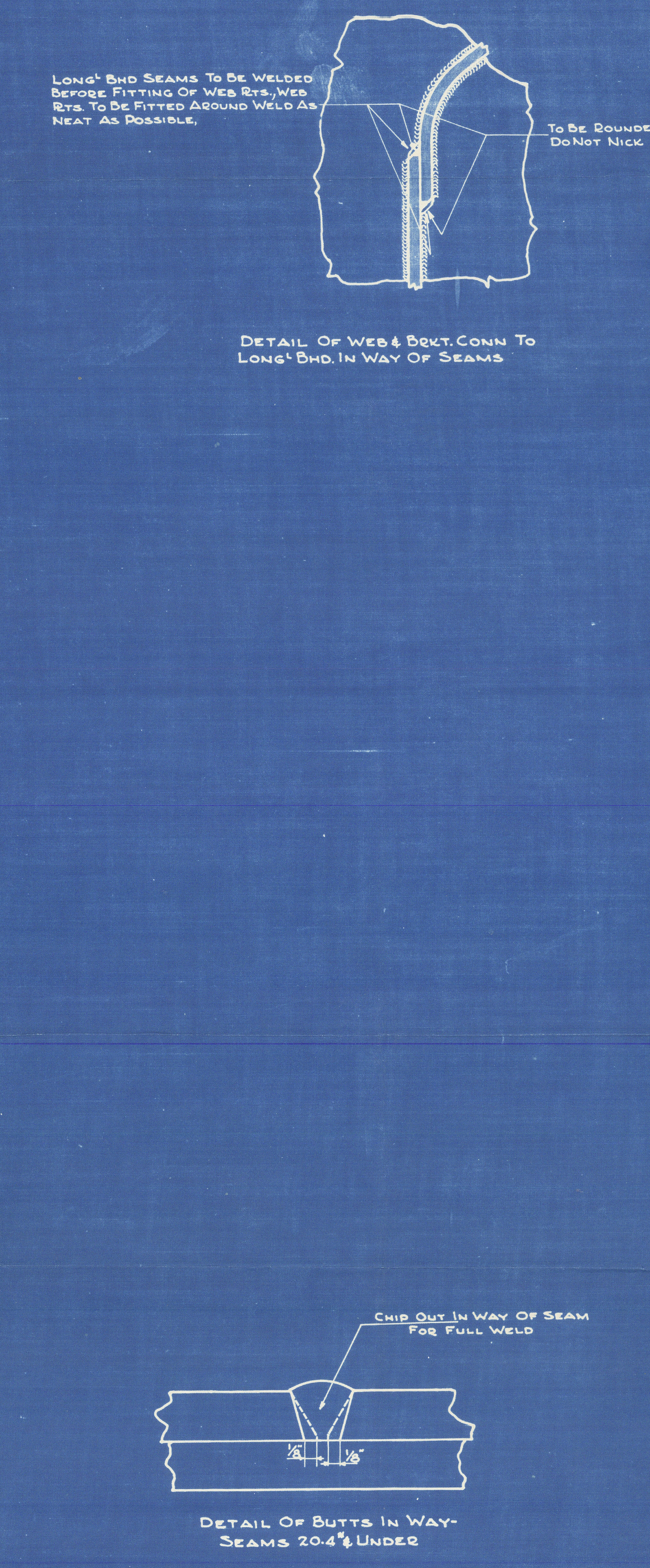
FOR DETAIL OF LONG'L BRKTS SEE DRWG. H-4367-12-42

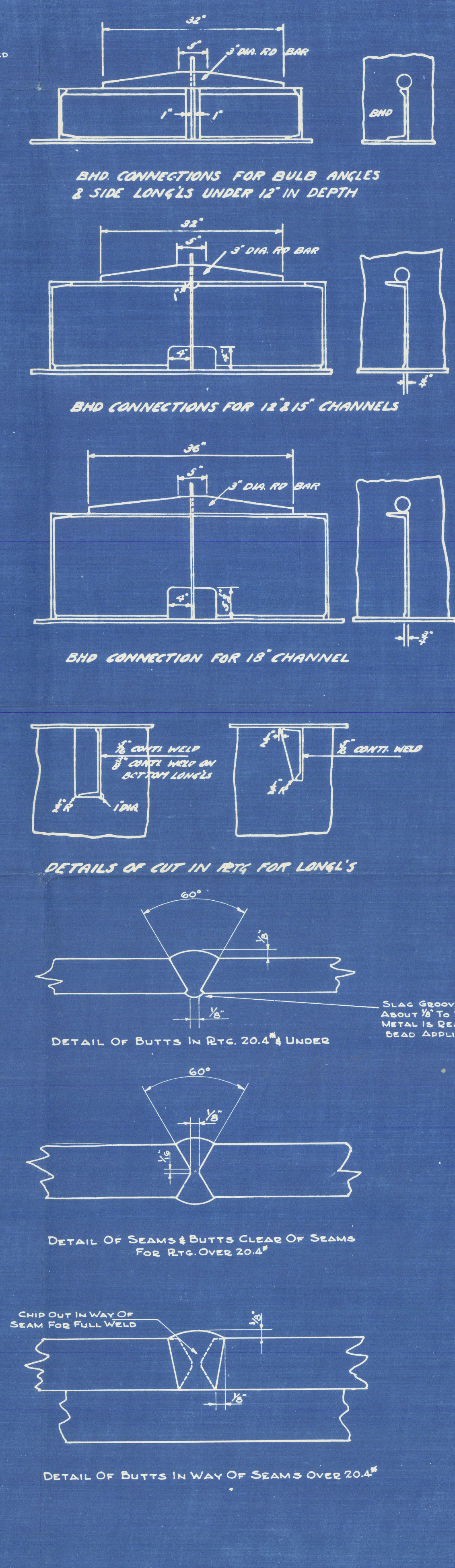
,STANVAC CALCUTTA.

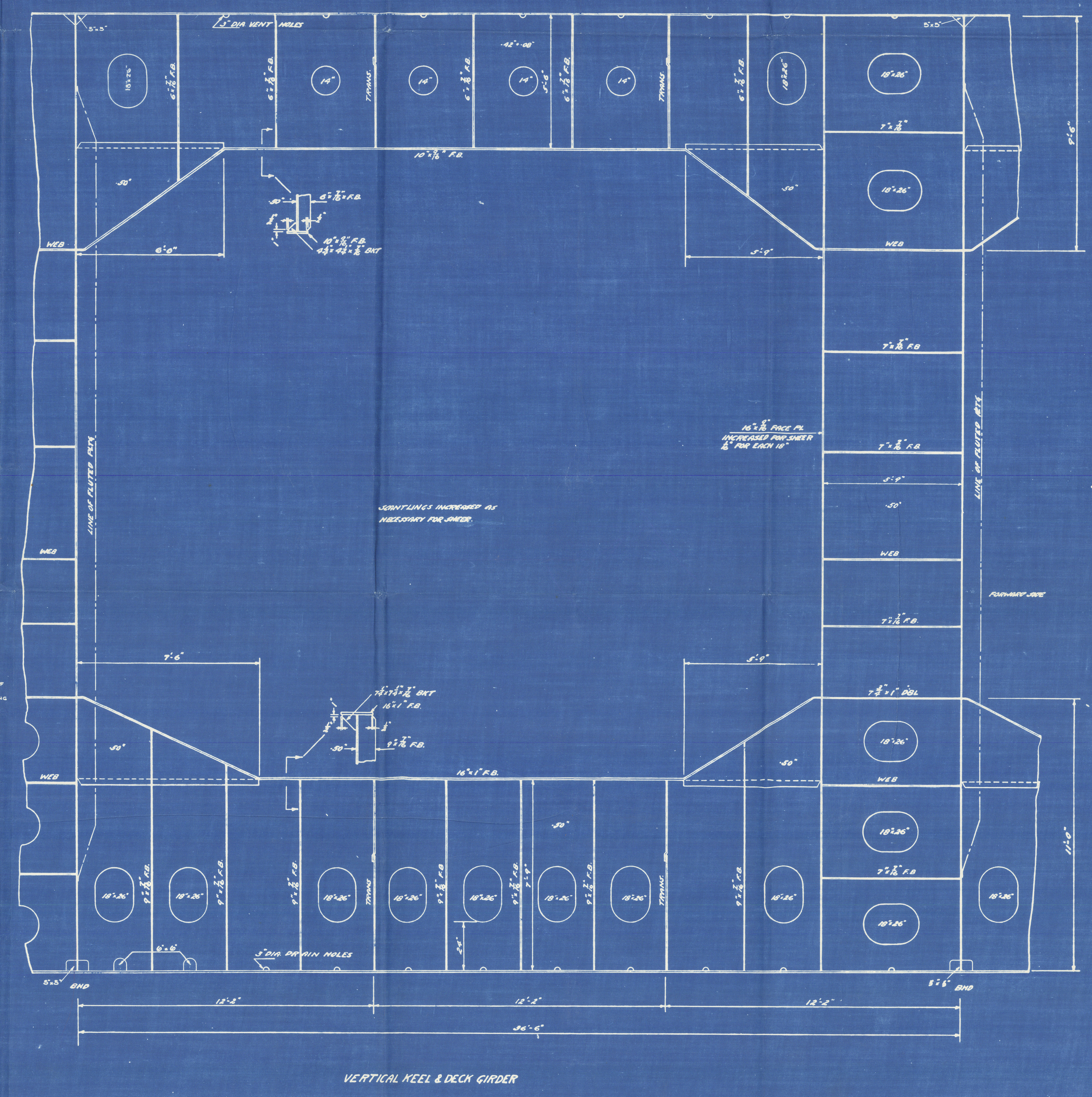
BETH'LEM YD NO. 4424

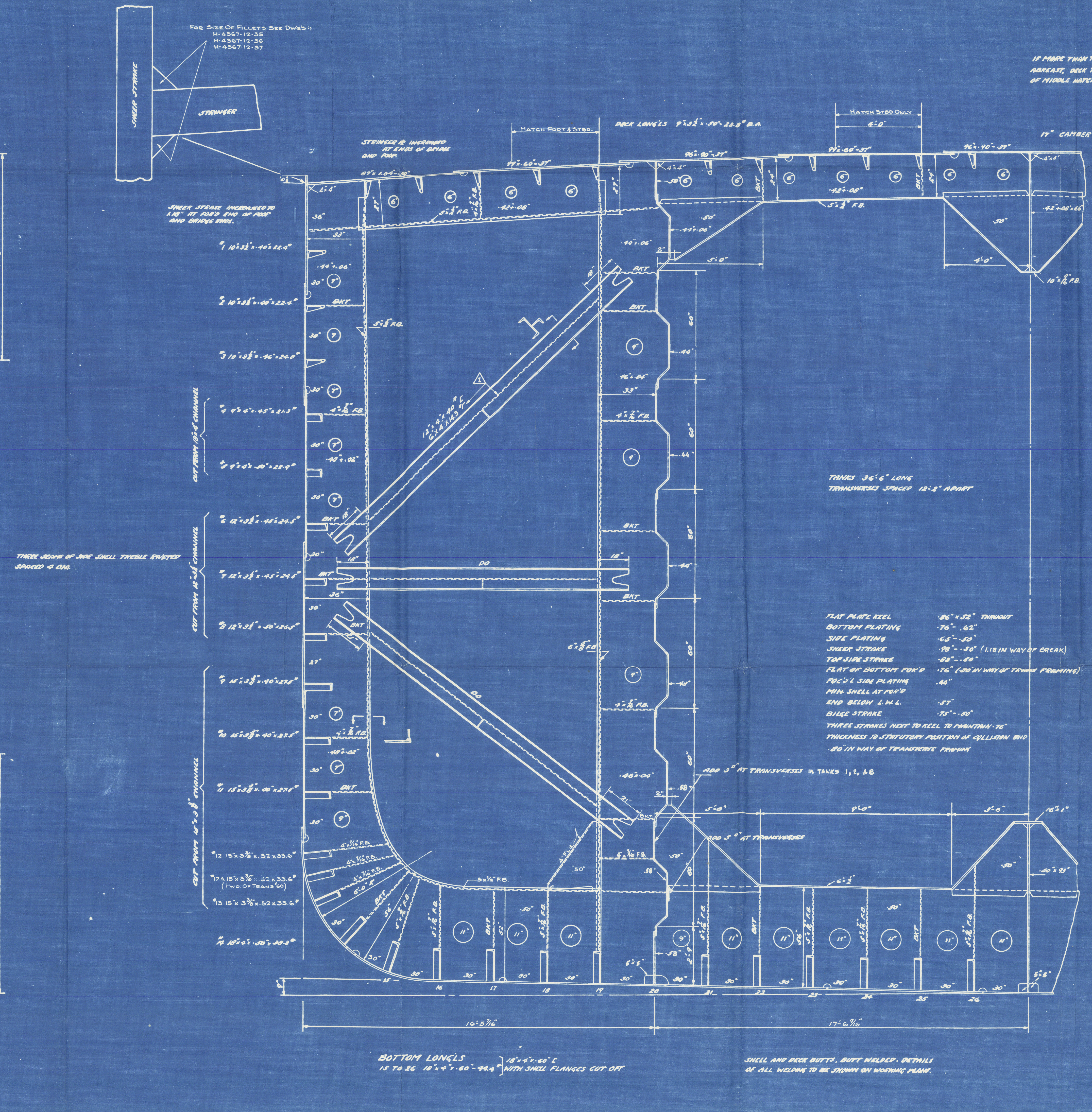
MIDSHIP SECTION

1


Detail of Web & Bkt. Conn. to Longl. Bhd. in Way of Seams
Detail of Butts in Way Seams 20.4# Under


End Connections for Bulb Angles & Side Longl's Under 12" in Depth
End Connections for 12"&15" Channels
End Connection for 15" Channel
Details of Cut in Bkts. for Longl's
Detail of Butts in Bkts. 20.4# Under
Detail of Seams & Butts Clear of Seams for Bkts. Over 20.4#
Detail of Butts in Way of Seams Over 20.4#


VERTICAL KEEL & DECK GIRDER


Stringer
Hatch Side Girder
Bottom Longl's
Shell and Deck Butts, Butt Welded. Details of All Welding to Be Shown on Working Plans

FLAT PLATE KEEL ·86" × 52" THRUOUT
BOTTOM PLATING ·76" - .62"
SIDE PLATING ·65" - ·50"
SHEER STRAKE ·98" - ·50" (1.18 IN WAY OF BREAK)
TOP SIDE STRAKE ·83" - ·50"
FLAT OF BOTTOM FOR'D ·76" (·80" IN WAY OF TRANS FRAMING)
FOC'S'L SIDE PLATING .44"
MIN. SHELL AT FOR'D
END BELOW L.W.L. ·57"
BILGE STRAKE ·75" - ·50"
THREE STRAKES NEXT TO KEEL TO MAINTAIN ·76"
THICKNESS TO STATUTORY POSITION OF COLLISION BHD
·80" IN WAY OF TRANSVERSE FRAMING

ALTERATIONS

Nº	DESCRIPTION	DATE	MADE BY	APPV'D
I	SCANTLINGS REVISED TO SUIT AVAILABLE ROLLED SHAPES	12-23-41	J.J.D.	
II	DUPLICATION FOR H-4423-26	6-10-42	K.H.J.	
III	DUPLICATION ADDED FOR HULLS 4430 & 4431	5-15-44	DEB	

NOTES

1. ALL WELDING TO MEET THE REQUIRENTS OF THE AMERICAN BU. OF SHIPPING
2. DRAIN HOLES 2"×1" SPACED 18" CTR. TO CTR. AT HEEL OF ALL LONGLS. - BULKHEAD STIFFENERS & WEBS TO HAVE DRAIN HOLES CUT IN FAYING EDGES.
3. LIGHTENING HOLES TO BE KEPT AT LEAST 10" CLEAR OF NOTCHES FOR LONGLS

DIMENSIONS

LENGTH B.P.	487'-6"
BEAM	68'-0"
DEPTH (MLD)	37'-0"
DRAFT	29'-10½"

EQUIPMENT

1ST BOWER	9,950#
2ND BOWER	9,950#
SPARE BOWER	9,950#
STREAM-STOCKLESS	3,710#

ANCHOR CHAIN 300 FATHOMS 2⅜ STUD LINK C.S.
STREAM LINE 120 FATHOMS 1⅝" DIA 6×24 STEEL WIRE (FOR H-4374 & 75 SEE WIRE ROPE LIST)
TOW LINE 130 FATHOMS 1 15/16" DIA 6×24 STEEL WIRE
HAWSERS 2 EACH 100 FATHOMS 8" MANILA
WARPS 2 EACH 100 FATHOMS 8" MANILA

HULL Nº	M.C. Nº	NAME	CHARGE
4431	2456		H-4430
4430	2455		H-4430
4426	1682		H-4423
4425	1681		H-4423
4424	1680		H-4423
4423	1679		H-4423
4390	528		H-4386-SM37
4389	527		
4388	526		
4387	525		
4386	524		H-4386-SM37
4385	523		H-4382-SM37
4384	522		
4383	521		
4382	520		H-4382-SM37
4381	519		H-4378-SM37
4380	518		
4379	517		
4378	516		H-4378-SM37
4375			H-4374
4374			H-4374
4373			H-4373
4368			H-4367
4367			H-4367

BETHLEHEM SHIPBUILDING CORP. LTD.
FORE RIVER PLANT QUINCY, MASS.
DESIGN DEPT.

MIDSHIP SECTION.

SCALE ½ IN. = 1 FOOT DATE 10 MARCH 1941
DRAWN D.F.M. APPROVED J.B. Hewitt
CHECKED J.M.
IN CHARGE H.L.O. APPROVED

APPROVED BY AM. BUR. OF SHIPPING - DEC-30-1941
" " U.S. MARITIME COMM. - JAN-1-1942

APPROVED
DEC 21 1945
LLOYD'S REGISTER OF SHIPPING
NEW YORK

U.S.M.C — 3-F
8-11-43

CLASS ✠ A1 Ⓔ OIL CARRIER

H-4367-12-4

BETHLEHEM-SPARROWS POINT SHIPYARD, INC.
SPARROWS POINT, MD.

MIDSHIP SECTION

SCALE ½" = 1-FOOT DATE MAY-13-1940
DRAWN APPROVED
TRACED APPROVED
CHECKED APPROVED

*

.STANVAC CALCUTTA.

BETH'LEM YD NO. 4424

STERNFRAME

3

010777-010782-0008

E D C B A 0 1 2 3 4 5
Steering gear flat - 32'-3" above B.L.
32'-0" W.L.
11'-1" aft of A.P.
29'-8¾" designed L.W.L.
10'-0" aft of A.P.
28'-0" above B.L.
Section at frame A'
Section at ℄ rudder stock
Section at Fr. "0"
Weld bolt head to inside plate
Drill 25/32" dia. hole for ¾" bolt
Detail of joint in closing plate Scale 1½" = 1 foot
Detail of attachment of closing plates Scale 1½" = 1 foot
Section at Fr. #1
Section at Fr. #2
Section at Fr. #3
Section at Fr. #4
1½" dia. holes in all webs except in Fr. #5
45° V continuous weld
11 - 1⅛" dia. snap hd. and point body bound rivets Hull 4426 and all prior hulls
3" × 1½" × 2'-0" long - key
11 - 1⅛" dia high hammer ctsk point button head, body bound rivets for hulls 4430 & 4431 and all future hulls
See detail below
3 - ½" dia. ctsk. head cap screws
Section "B-B" Scale 1" = 1 foot
3" × 1½" × 2'-3" long - key
Section "C-C" Scale 1" = 1 foot
Detail of upper gudgeon Scale - 1" = 1 foot
Spot face
Contour to be faired to suit contra guide lines of rudder see drwg. H-4353-12-
℄ of rudder stock and pintles
Stern post to be finished smooth & true in way of rudder stop after stern post gudgeon is bored. Dimension given is minimum & must be held.
About 5" - striking surface to be finished smooth. ⅛" less than dim. given
Section "D-D" showing detail of rudder stop Scale 1" = 1 foot
Gudgeon bored to suit rudder pintle - see drwg. H4367-12-2
Contour above 20'-0" W.L. to be faired to suit contra guide lines of rudder - see drwg. H-4367-12-2
20'-0" W.L.
16'-0" W.L.
6'-0" W.L.
4'-0" W.L.
2'-0" W.L.
Base line
3/16" weld all around joint & strap
Holes in casting for thru rivets for butt strap to be drilled by machine shop. Holes in butt strap lifted from casting
12 - 1⅛" dia. thru rivets
Butt strap 30# plate
Patt. No 49895-A for hulls 4367, 68, 73, 74 & 75 only
See Sec A'-A' for hulls H-4378 to H-4390 incl and succeeding hulls
2'-3" dia core
℄ of propeller shaft
For detail of rudder see drwg. # H-4367-12-2
Boss to be chipped fair with contour of propeller hub
Center of rudder stock and pintles
8 - 6" × 12" × ½" zinc plates with 32 - ⅝" dia. tap bolts
16 - 1⅛" dia thru rivets
Holes in casting for thru rivets for butt straps to be drilled by machine shop. Holes in butt strap lifted from casting
End of keel plate rabbet
Gudgeon bored to suit rudder pintle bushing - see drwg. No. H-4367-12-2
2 11/16" from bottom of casting
A.P.
Aft side of stern frame looking forward
Forward side of stern frame - looking aft
1 1/16" dia. holes for 1" dia. rivets. Locate to suit trans. #5
1" tap rivets
Section "A-A" Scale 1" = 1 foot
Patt. No. 49895-A for hulls 4367, 68, 73, 74 & 75 not to be used for future hulls
See Sec A'-A' for hulls H-4378 to H-4390 incl
Section at 20'-0" W.L. Scale ½" = 1 foot
Fr. 0 Fr. #1 Fr. #2 Fr. #3 Fr. #4 Fr. #5
1⅛" high hammer ctsk point body bound button head rivets
Spot face 3"
3/16 weld all around
Typical detail of rivets to be used thru joints @ 6'-0" & 16'-0" W.L. Scale 6" = 1 foot
℄ rudder stock
Cut in plate - ½" clear of rudder stock in all positions of turning
℄ ship
Plan at bottom of rudder trunk showing arrangement of closing plates Scale ½" = 1 foot
Half siding - 7½" to 6" straight taper
Plan view at 2'-0" W.L.
Section at frame No. 1
Section at frame No. 3
Section at frame No. 4
Section at frame No. 5
Section at frame No. 6
Patt. No. 49895-AB for hulls 4378 to 90 and all succeding hulls
2'-6" dia core
℄ propeller shaft
Part elevation of stern frame for hulls H-4378 to H-4390 incl and hulls 4423-24-25 & 26
Section A'-A' Scale 1" = 1 ft

BILL OF MATERIAL

	ITEM	NO. REQ'D	DESCRIPTION	MATERIAL	PATTERN NUMBER	REMARKS	WEIGHT
I	1	1	STERN FRAME (UPPER)	CAST STEEL ANNEALED	49894A	EST. WGHT - 21,200#	23250
	2	1	STERN FRAME (MIDDLE)	CAST STEEL ANNEALED	49895AB	EST. WGHT. - 16,150#	15.600
	3	1	STERN FRAME (LOWER)	CAST STEEL ANNEALED	49896A	EST. WGHT - 18,100#	16,450
	4	1	KEY (UPPER PROPELLER POST PALM)	MED. STEEL		3" × 1½" × 2'-0" LONG	30.
	5	1	KEY (LOWER PROPELLER POST PALM)	MED STEEL		3" × 1½" × 2'-3" LONG	35.
	6	6	CAP SCREW	MED STEEL		½" DIA. CTSK HD. - 2½" LG. O.A.	1.
II	7	29	TAP BOLT	MED STEEL		¾" DIA HEX. HD. - 1¼" LG. U.H.	5.
	8	9	BOLT & NUT (HEX NUT HEX. HD. BOLT)	MED STEEL		1¾" LONG UNDER HEAD.	3.
	9	1	BUTT STRAP (UPPER)	HULL STEEL		52" × 25" × 30# PL.	270.
	10	1	BUTT STRAP (LOWER)	HULL STEEL		60" × 25" × 30# PL.	312.
	11	1	CLOSING PLATE (PORT)	HULL STEEL		60" × 30" × 15.5# PL	187.
	12	1	CLOSING PLATE (STBD.)	HULL STEEL		60" × 38" × 15.5# PL.	242.
	13	8	ZINC PLATES	ZINC		6" × 12" × ½"	73.
	14	32	TAP BOLTS	STAINLESS STEEL		⅝" DIA. HEX HD. - 1¼" LG. U.H.	8.

See letter dated 5/15/44 in pattern file before using these patterns for future hulls

3/10/42

ALTERATION

NO.	DESCRIPTION	DATE	BY
I	PATTERN NO. FOR ITEM #1 CHANGED FROM 49894 TO 49894-A	2-1-41	H.C.M.
II	LENGTH OF BOLTS (ITEM #7) CHANGED FROM 2" TO 1¼"	4-16-41	K.F.
III	DUPLICATED FOR H-4374-5		E.H.C.
IV	DUPLICATED FOR H-4378 TO H-4390	11-13-41	R.C.H.
V	CORE IN STERN FRAME CHANGED FOR HULLS H-4378 TO H-4390 INCL SEE DETAIL	2/25/42	C.H.O.
VI 1-2	NOTES ADDED TO SECTION "D-D" DIMENSIONS CHANGED	1/21/43	F.E.M.
VII	RAN DUPLICATED FOR HULLS 4423-24-25-26 GEN NOTE #1 DELETED AND GEN. NOTE #8 ADDED APPLYING TO ALL HULLS LISTED	4-12-43	S.L.B.
VIII	DUPLICATIONS FOR HULLS 4430 TO 4435 INCL. ADDED	5-16-44	D.E.B.
IX 1 to 9	RIVETING IN JOINTS CHANGED. VIEW @ FR. SHOWN. NOTE ADDED FOR DRILLING OF HOLES THRU CASTING AT BUTT STRAPS. NOTE REGARDING WELDING AT BUTT STRAPS ALTERED. DUPLICATION FOR HULLS 4432-4435 INC DELETED	6/15/44	C.H.O.

4423-26 REPL

GENERAL NOTES

VII ~~1. STERN FRAME TO COMPLY WITH LLOYDS REGISTER OF SHIPPING AND AMERICAN BUREAU OF SHIPPING REQUIREMENTS - TESTS BY AMERICAN BUREAU OF SHIPPING ONLY.~~

2. MOULD LOFT TO FURNISH PATTERN SHOP WITH ALL NECESSARY TEMPLATES
3. ALL RIVET HOLES TO BE LAID OFF AND DRILLED BY YARD.
4. ALL TAPERS IN VERTICAL WEBS TO BE ON AFT SIDE
5. ALL TAPERS IN HORIZONTAL WEBS TO BE ON LOWER SIDE
6. FLOORS TO BE EFFICIENTLY RIVETED TO ATHWARTSHIP WEBS.
7. RIVETING TO BE IN ACCORDANCE WITH CLASSIFICATION SOCIETY RULES.

VII 8. STERN FRAME TO COMPLY WITH AMERICAN BUREAU OF SHIPPING REQUIREMENTS

	HULL No.	M.C. No.	NAME	CHARGE
X	~~4435~~	~~2460~~		~~H-4430~~
VIII	4434	2459		H-4430
	~~4433~~	~~2458~~		~~H-4430~~
	~~4432~~	~~2457~~		~~H-4430~~
	4431	2456		H-4430
	4430	2455		H-4430
VII	4426	1682		H-4423
	4425	1681		H-4423
	4424	1680		H-4423
	4423	1679		H-4423
IV	4390	528		H-4386 - SM37
	4389	527		
	4388	526		
	4387	525		
	4386	524		H-4386 - SM37
	4385	523		H-4382 - SM37
	4384	522		
	4383	521		
	4382	520		H-4382 - SM37
	4381	519		H-4378 - SM37
	4380	518		
	4379	517		
	4378	516		H-4378 - SM37
III	4375			H-4374
	4374			H-4374
	4373			H-4373
	4368			H-4367

CHARGE: H-4367 JOB No. ~~121~~ 1

Owner's Insp.	
Am. Bu. Insp.	
Lloyd's R. S.	
U. S. M. C. Insp.	
U. S. Navy Insp.	
U. S. C. G. Insp.	
Hull Str. Draft	1
Hull Outfit Draft	
Eng. Draft	1
Elec. Draft	1
Estimating	1
Order Dept.	
Structural	5
Pc. Room	2
Mold Loft	2
Carpenter Shop	
Outfit. Office	2
Outfit. No. 1 Pier	3
Outside Mach.	1
Rigging	
Material	1
Pipe Shop	
Pipe Draft	
Sheet Metal	
Boiler Shop	
Paint Shop	
Machine Shop	3
Smith Shop	1
Elec. Shop	
Hopeman Yard	
Warehouse	
PATTERN	1
TOTAL	

DEPT.	DATE ISSUED
ORDER	
OWNERS	
AM. BUREAU	
LLOYDS	
BU. OF M. INSP.	
INSPECTORS	
HULL DRAFT'G	
ENG. DRAFT'G	
STRUCT	
MOLD LOFT	
SHIP REPAIR	
CARPENTER	
PATTERN	
MACHINE	
SMITH	
BOILER	
SHEET METAL	
ELECTRIC	
PAINT	
PIPE	
MAT'L EXP.	

6 14 44

UAO-7817
UAO-8214
UAO-8614

APPROVED
DEC 21 1945
LLOYD'S REGISTER OF SHIPPING
NEW YORK

EC-74112
ECO-741
EC-67112
EC-73112
ECO-674
ECO-732
UAO-231
UAO-301

APPROVED BY	DATE
U.S. MARITIME COMMISSION	DEC. 3, 1941. FILE No. S11-8 (H)
UNION OIL CO. OF CALIFORNIA.	FEB. 24, 1941
AMERICAN BUREAU OF SHIPPING.	FEB. 5, 1941
STANDARD OIL CO. OF N.J.	DEC 3, 1940
AMERICAN BUREAU OF SHIPPING.	NOV. 27, 1940

BETHLEHEM-SPARROWS POINT SHIPYARD, INC.
SPARROWS POINT, MD.

H-4367-12-1

~~BETHLEHEM STEEL COMPANY~~
~~SHIPBUILDING DIVISION~~ ~~SPARROWS POINT, MD.~~

STERN FRAME

SCALE As Noted DATE Nov. 22 1940
DRAWN K.W.F. APPROVED C.S.
TRACED APPROVED
CHECKED APPROVED

GROUP 2

010777-010782-0008

STANVAC CALCUTTA.

BETH'LEM YD NO. 4424

RUDDER

④

010777-010782-0009

2¼" ⌀ Hole In Eye (15)
For 1¾" Anchor Shackle
2" Dia Screw Pin
60° V Weld To Top Pt
Weld All Around Both Sides
3"x1" Plug Weld Locate To Suit
60° V Weld To Trailing Edge Piece
20.4# Side Pt
Trailing Edge Piece
Detail Of Lifting Eye (15)
Scale 3" = 1 Ft
Key 4x2 (41)
3-¾" ⌀ Ctsk Hd Mach Screws (42) Equally Spcd
Plan At Top
Plan Sec "NN"
Scale 1½" = 1 Ft
Sec "HH"
Scale 3" = 1 Ft
6"x½" F.B. Tripper Pt (7)
Note / Dimensions Given Are To Inside Of Plating
Offsets For Rudder
Scale 1" = 1 Foot
Top Plate (10) Pc. Mk. RS-3 - Plate Sheet # 75-A
Bottom Pt (11) Pc. Mk. RS-3 - Plate Sheet # 75-A
Side Plates (17) Pc. Mk. RS-1 - Plate Sheet # 75-A
Diaphragm Pt (8) Pc. Mk. RD-1 - Plate Sheet # 75-A
Intercostal Pt (9) Pc. Mk. RV-1 - Plate Sheet # 75-A
Fairwater Pt (18) Pc. Mk. RS-2 - Plate Sheet # 75-A
Fairwater Pt (4)(5) Pc. Mk. RF-1 - Plate Sheet # 75-A
Closing Plate (6) Pc. Mk. RD-1 - Plate Sheet # 75-A
Rudder Post (22) Pc. Mk. RP-1 - Plate Sheet # 75-B
Trailing Edge Piece (14) Pc. Mk. F-4040 - Shape Sheet # 312
Section "LL"
Rudder Stock - For Det. See Dr. H-4367-12-3
Section "FF" 4'-6" Aft Of ℄ Stock Looking Forward
Detail "A"
Scale 3" = 1 Ft
Detail Of Drain And Fill Plug (21)
Scale Full Size
Typical Sec "PP"
Elevation View Along ℄ Of Ship
Scale ½" = 1 Ft
Sec "OO" Port & Starbd
Scale 3" = 1 Ft
Elevation Of Rudder
Scale ½" = 1 Ft
Typical Lug Detail
Scale 1½" = 1 Ft
Section "AA"
Section "BB"
Section "CC"
This Is Typical With Exception Of Pipe Thru
Detail "C"
Section "DD"
Scale ½" = 1 Ft
Section "EE"
Detail Of (28) Upper Retaining Ring
Scale 1½" = 1'-0"
Detail Of (29) Lower Retaining Ring
Scale 1½" = 1'-0"
(24) Detail Of Pintle
(27) Detail Of Washer For Pintle Nut
(25) Detail Of Hex. Nut
Detail B
Full Size
Pintle
℄ Of Rudder Stock
Stern Frame
Plan At Top Of Rudder Showing Detail Of Rudder Stops, And Palm
Scale 1½" = 1 Foot
Section "GG"
Scale 1½" = 1 Foot
Rudder Stock
Section K-K
Section M-M
Section J-J
Thru Lower Rudder Casting And Gudgeon Of Lower Stern Frame
Enlarged Detail Bearing Staves
Upper Casting
Lower Casting

See Letter In Pattern File Dated 5/15/44 Before Using These Patterns For Future Hulls.

BILL OF MATERIAL (FOR ONE SHIP)

Item No	No Reqd	Description	Material	Patt No	Remarks	Worksorder Hulls 4324-26 Only	Reqns Hulls 4324-26 Only
1	1	Upper Casting	Cast Steel Annealed	118,069	Est Wt 5,390 #		✓
2	1	Lower Casting	Cast Steel Annealed	118,070	Est Wt 3,593 #		✓
3	2	Closing Plates	Hull Steel	——	10" Dia x 20.4 # Cut From Stock		✓
4	1	Upper Fairwater Plate Side	Hull Steel	——	Approx 22"x110"x20.4 # Mrk-RF-1 Sheet # 75A	Ord On P.S. 75 A	✓
5	1	Upper Fairwater Plate Top	Hull Steel	——	Approx 18"x48"x20.4 # Mrk-RF-1 Sheet # 75A	Same	✓
6	2	Lower Closing Plate Side	Hull Steel	——	Approx 26x48"x20.4 # Cut From	Same	✓
7	4	Upper And Lower Tripper Pcs	Hull Steel	——	6"x½" F.B Approx 30" Long Stock		✓
8	8	Diaphragm Plates	Hull Steel	——	Aprox 23"x94"x20.4 # Cut From Mrk RD-1 P.Sh-75A	Ord On P.S. 75 A	✓
9	8	Vertical Intercostal Plt's	Hull Steel	——	Approx 18x34"x20.4 # Cut From Mrk RV-1 P.Sh # 75A	Same	✓
10	1	Top Plate	Hull Steel	——	Approx 18x36"x40.8 # Cut From Mrk RS-3 P.Sh-75A	Ord On P.S. 75 A	✓
11	1	Bottom Plate	Hull Steel	——	Approx 18x84"x40.8 # Cut From Mrk RS-3 P.Sh 75A	Same	✓
12	5	Fairwater Diaphram Plates	Hull Steel		Approx 23"x36"x20.4 # Cut From Mrk RD-1 P.Sh-75A	Same	✓
13	1	Leading Edge Pipe	Steel		3½" ⌀ Double Ex Hvy Approx 13'-2" Long S/S # 372	Ord On S.S. 372	✓
14	1	Trailing Edge Piece	Steel		4"x2½" F.B x Approx 20'-3" Long	Ord On S.S. 312	✓
15	1	Lifting Eye	Forged Steel		See Detail		✓
16	1	Anchor Shackle 1¾" D	Galv Steel		T. Laughlin, Cat 100 Pg 6 Fig G 209	Works Order UAO-237 Item 14	Req UA 23858
17	2	Side Plates	Hull Steel		Approx 93"x252"x20.4 Cut From Mrk RS-1 P.Sh-75A	Ord On P.S. 75 A	✓
18	2	Fairwater Side Plates	Hull Steel		Approx 33"x162"x20.4 Mrk RS-2 P.Sh-75A	Same	✓
19	1	Pipe Thru For Lifting	Galv Steel		3½" ⌀ Double Extra Hvy Approx 20" Long S/S # 372	Stock	✓
20	2	Doubler Plts Around Pipe	Hull Steel		9"x9"x20.4 # From Cuttings Stock		✓
21	5	Fill & Drain Plugs	Brass		1" Std Pipe		✓
22	1	Tube	Hull Steel		18" O.D. 1¼" Thick Approx 13'-2" Long Mrk RP-1 P.Sh-75B (Leetsdale)	Ord On P.S. 75-B To Leatsdale	Req UA 231308 ✓
23	2	Pintle Sleeve	Comp G	49529-A		Work Order UAO-237 Item 3	Req UA 23856 ✓
24	2	Pintle	Med Steel			Work Order UAO-237 Item 4	✓
25	2	Nut For Pintle	.35 Carbon Steel		6" Std Thds 4 Thds Per Inch 9⅛" Across Flats	UAO-237 Item 5	✓
26	2	Split Pin For 6" Nut	Brass		½" Dia x 15"		✓
27	2	Washer At Pintle	Med Steel		12" OD x 40.8 # Pt For 6⅛" I.D.	UAO-237 Item 14 2 of 2	✓
28	1	Upper Retaining Ring	Hull Steel		17½" Dia x 20.4 # Pt	UAO-237 Item 2	✓
29	1	Lower Retaining Ring	Hull Steel		17¼" Dia x 20.4 # Pt	UAO-237 Item 16	✓
30	28	Tap Bolts For Rings	Brass		¾" Hex Hd 2½" Long U.H.	UAO-237 Item 8	Req UA 23857
31	28	Lock Washers For Tap Bolts	Bronze		⅛" Thick For ¾" Tap Bolts	UAO-237 Item 9	Req UA 23857
32	6	Coupling Bolts 3¾" ⌀ Hex	Med Steel		13" Long U.H. 6 Thds Per Inch	UAO-237 Item 6	✓
33	4	Ctsk Hd Mach Screws	Brass		½" ⌀ 1" Long	UAO-237 Item 12	✓
34	2	Gasket For Pintle	Lampwick		¼"x½"x2'-9" Soaked In Red Lead		✓
35	6	Coupling Nuts (Hex)	Med Steel		3¾" Std 6 Thds Per Inch	UAO 237 Item 7	✓
36	6	Split Pin For Coupling Bolts	Brass		½" ⌀ x 10"		✓
(1) 37	2	Flat Bar For 18" Tube	Hull Steel		1½x⅜x13'-6" Ord On Shape Sheet # 311 To Leatsdale	Ord On S.S. 314 311 To Leatsdale	✓
38	8	Flat Bar For Fairwater	Hull Steel		Cut From 3x½x8'-0" Stock		✓
39	12	Upper Bearing	Micarta		3½"x10⅜" Radius To Suit Pintle	UAO 237 Item 17	Req UA 23859 ✓
40	12	Lower Bearing	Micarta		3½"x11" " " "	UAO-237 Item 18	" ✓
41	1	Key 4"x2"	Med Steel		3'-0" Long	UAO-237 Item 15	✓
42	3	Ctsk Hd Mach Screws	Brass		¾" ⌀ x 1¼" Long	UAO-237 Item 11	✓
43	1	Eye Bolt Shouldered	Forged St	Item 9 Beth Class 9	1½" Long Under Shoulder Thds 1" Std	UAO 237 Item 17 2 of 2	✓
44							
45							
46							
47							
48							
49							
50							

REFERENCE PLANS

Stern Frame H-4367-12-1
Rudder Stock On Steering Gear Details H-4367-12-3

UAO 23172

MATERIAL ORDERED

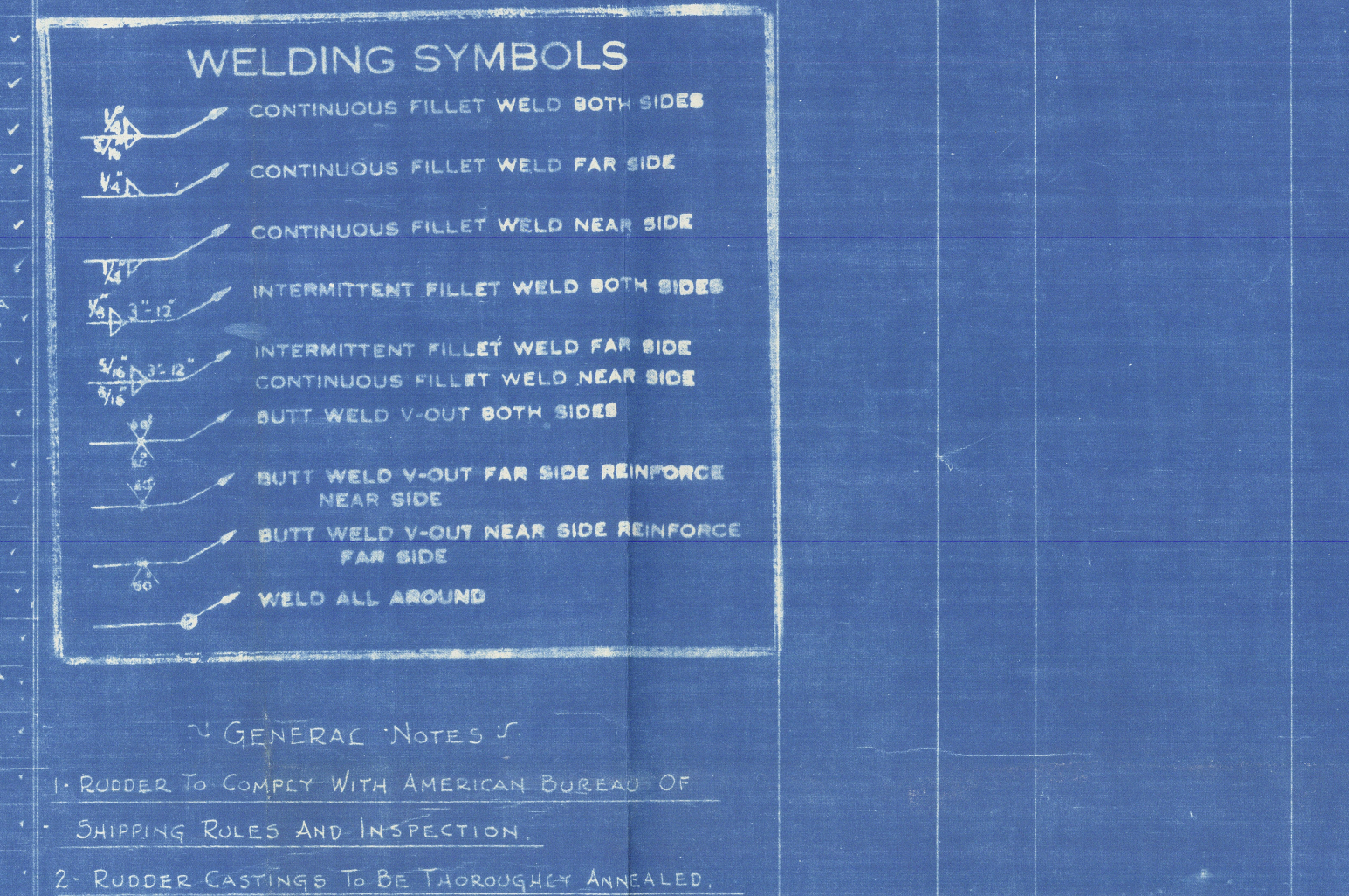
Plate Sheet No. - 75-A, 75 B

Shape Sheet No. - 312, 314, 372 311

Total Wt Estimated 26,624 #

ALTERATION

No	Description	Date	Made By	App'vd
(1)	Size Of Flat Bar Item 37 Changed From ½"x¼ To 1½"x⅜" Union Melt Requ 11/10/43	1/3/43	C.H.O.	
(11)	Duplication Added For Hulls 4430, 4431, 4432, 4433, 4434, & 4435.	5/15/44	W.K.C.	
(111)	Hulls 4432 To 4435 Deleted	8/2/44	HCC	



WELDING SYMBOLS

- Continuous fillet weld both sides
- Continuous fillet weld far side
- Continuous fillet weld near side
- Intermittent fillet weld both sides
- Intermittent fillet weld far side
- Continuous fillet weld near side
- Butt weld V-out both sides
- Butt weld V-out far side reinforce near side
- Butt weld V-out near side reinforce far side
- Weld all around

~ GENERAL NOTES ~

1- Rudder To Comply With American Bureau Of Shipping Rules And Inspection.
2- Rudder Castings To Be Thoroughly Annealed.
4- Mold Loft To Furnish Pattern Shop With Necessary Templates.
5- Area Of Rudder From ℄ Pintle To Trailing Edge 162.34 □'
6- " " " " " " Leading Edge 50.19 □'
7- Area Of Rudder Total 212.53 □'
8- Centre Of Area From ℄ Of Pintles 2.66 Ft
9 " " " Above Bottom 10.23 Ft
10- Centre Of Pressure From Leading Edge 3'-10⅝
11- Speed (Contract) 15½ Knots
12- Rudder To Be Tested Watertight With A 7'-0 Head Of Water With Rudder In A Vertical Position.
13- Rudder To Be Filled With "Ennjay" And To Be Drained After Testing.
14- Welding Lugs On Port Side Of Rudder May Be Eliminated & Diaphrams Welded To Side Pts With ⅜" Double Continuous Weld At The Option Of The Yard.
15- Specification's For Steel Castings To Be American Bureau Of Shipping Steel For Hull Casting - Min Tensile 58,000 P.S.I. Min Elongation - 20% In 2"
16- Plug Welds To Be Used At All Landings On Castings On Starbd Side, Both Edges Of Overlaps Welded To Casting On Port Side
17- The 18" ⌀ Tube Is To Be Filled With "Ennjay" And Drained Before Closing Plts Are Welded Into Place.

APPROVED
DEC 21 1945
LLOYD'S REGISTER OF SHIPPING
NEW YORK

UAO 30172

Approved By	Date
U.S. Maritime Comm	Nov 1 1943
American Bureau Of Shipping	Oct 23th 1943

Hull No	M.C. No	Name	Charge
~~4435~~	~~2460~~		H-4430
~~4434~~	~~2459~~		
~~4433~~	~~2458~~		
~~4432~~	~~2457~~		
4431	2456		
4430	2455		H-4430
4426	1682		H-4423
4425	1681		H-4423
4424	1680		H-4423

Charge H-4424 Job 12-1

H-4424-12-2

BETHLEHEM-SPARROWS POINT SHIPYARD, INC.
SPARROWS POINT, MD.

RUDDER

SCALE Noted DATE 10/25/43
DRAWN J.W.H. D.E.B. C.H. Onken APPROVED
TRACED APPROVED
CHECKED APPROVED

Dept	10-27-43	11-4-43	5-23-44 8-3-44
Owners			
Amer. Bur.	3		
Lloyd's R.S.			
U.S.M.C.	4		3
U.S. Navy			
U.S.C.G.			
[illegible] N.Y.			
Vendor			
Owner's Insp.			
Am. Bu. Insp.		1	1
Lloyd's R.S.			
U.S.M.C. Insp.		1	1
U.S. Navy Insp.			
U.S.C.G. Insp.			
Hull Str. Draft	1	1	1
Hull Outfit. Draft			
Eng. Draft		1	1
Elec. Draft		1	1
Estimating		1	1
Order Dept		4	4
Structural		3	8
Fe. Boss		2	2
Mold Loft	1	2	2
Carpenter Shop			
Outfit. Office		5	4
Outfit. No. 1 Pier		3	4
Outside Mach.		8	6
Rigging			
Material		1	1
Pipe Shop			
Pipe Draft			
Sheet Metal			
Boiler Shop			
Paint Shop			
Machine Shop		3	3
Smith Shop		1	1
Elec. Shop			
[illegible] Yard			
Warehouse			
Pattern Shop	2	2	
Total	11	42	41

Hull 4430-31

Sq Ft 28.75